Reservoir Storage Outlook

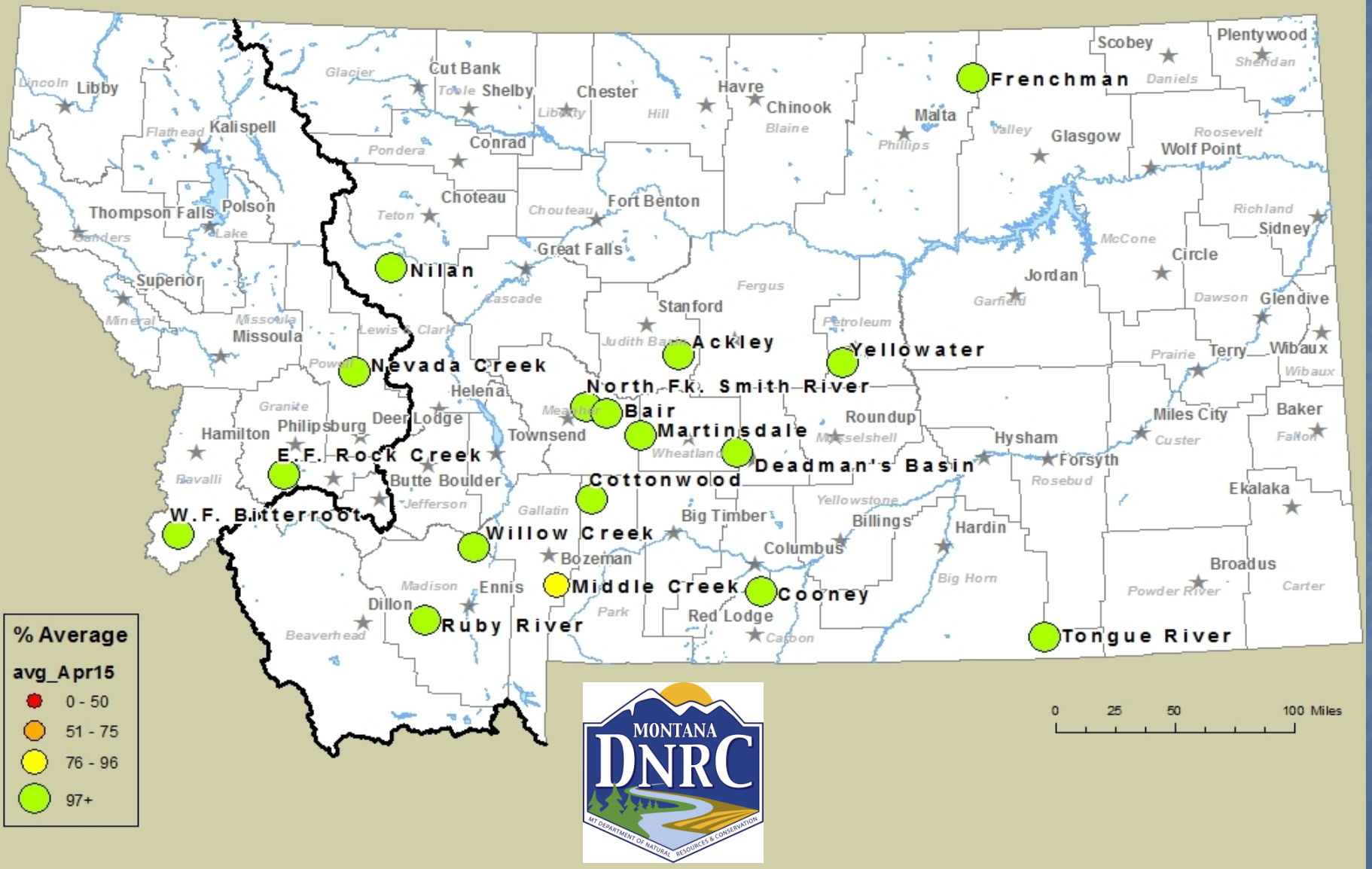
May 21, 2015

DNRC Water Resources Division

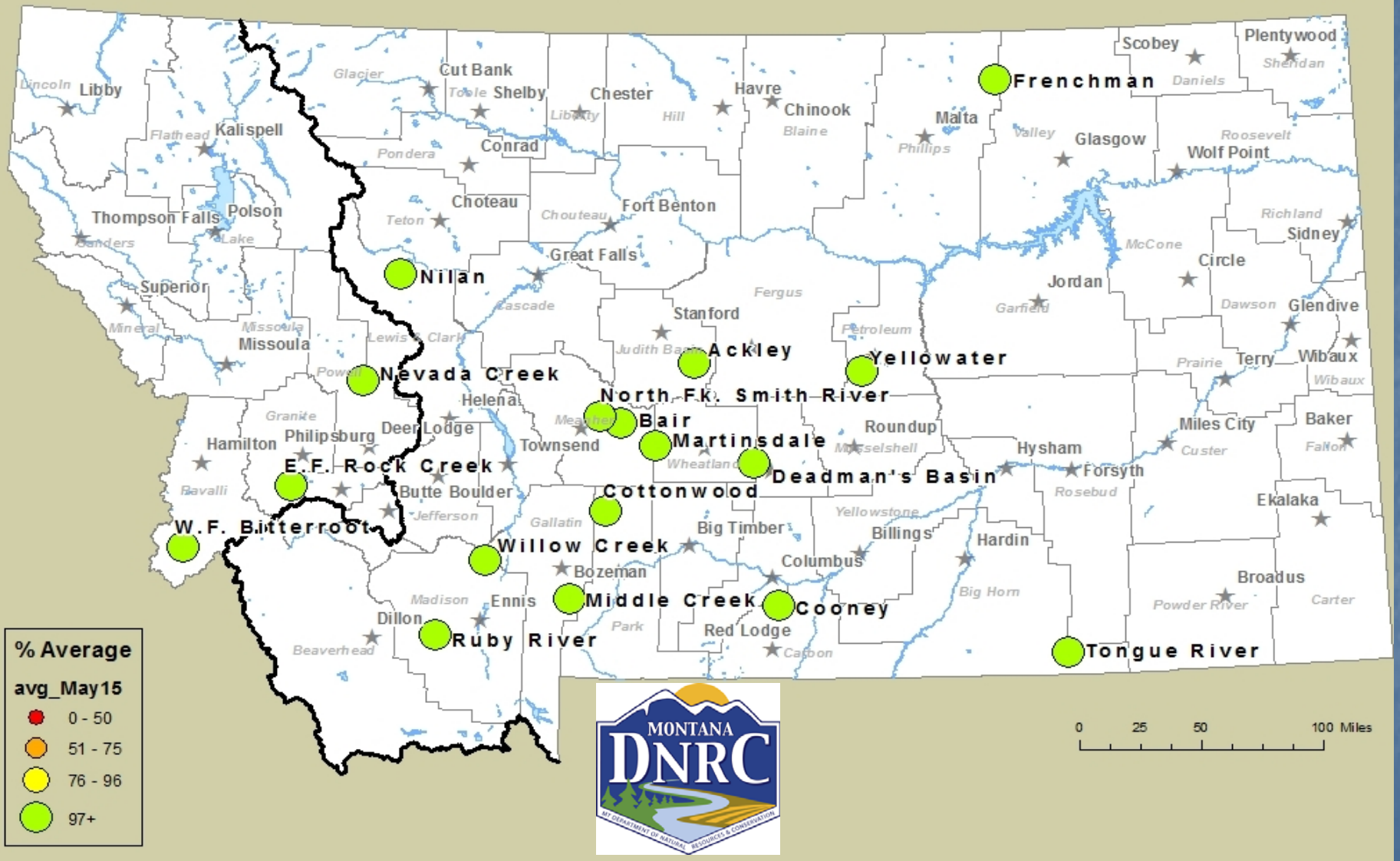
State Water Projects Bureau

Montana DNRC State Water Projects Bureau Reservoirs

Reservoir Contents Report
April 16, 2015



Reservoir Contents Report
May 21, 2015



% Average

avg_May15

- 0 - 50
- 51 - 75
- 76 - 96
- 97+

MONTANA DNRC

MONTANA DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION

WATER RESOURCES DIVISION - STATE WATER PROJECTS BUREAU

April 30, 2015

All Contents in Acre-Feet

RESERVOIR	TOTAL CAPACITY (includes dead storage)*	CONTENTS						READING DATE	COMMENTS
	Full Pool	AVERAGE	Last Year	Last Month	PRESENT	% CAPACITY	%AVERAGE		
	Contents	1960 - 2014	4/30/2014	38/31/2015	4/30/2015	4/30/2015	4/30/2015		
ACKLEY	6,722	3,678	4,112	3,997	4,873	72	132	5/1/2015	elev.= 4310.3
BAIR	7,300	5,289	5,114	5,609	6,370	87	120	4/30/2015	elev.=5321.49
COONEY	28,230	22,403	20,950	22,280	23,580	84	105	4/22/2015	elev.=4245.48 (23,580 AF)
COTTONWOOD	1,900	1,518	1,981	1,940	1,900	100	125	4/23/2015	elev.= 5102.48
DEADMAN'S BASIN	75,968	53,666	69,290	70,577	75,744	100	141	5/4/2015	elev.=3920.9 (71,994 AF)
E.F. ROCK CREEK	16,040	9,666	10,224	11,045	11,868	74	123	5/4/2015	elev.=6044.2
FRENCHMAN	2,777	2,431	2,777	2,777	2,777	100	114	4/30/2015	spilling
MARTINSDALE	23,348	12,124	15,138	19,337	22,924	98	189	5/4/2015	elev.=4778.8
MIDDLE CREEK	10,184	6,523	4,430	5,818	7,501	74	115	5/4/2015	elev.=6709.0
NEVADA CREEK	11,207	10,018	10,402	10,861	11,244	100	112	5/3/2015	elev.=4616.1
NILAN	10,992	7,138	7,920	10,020	10,571	96	148	4/21/2015	elev.=4441.77
N.FK. SMITH RIVER	11,406	8,783	10,732	10,330	10,399	91	118	4/30/2015	elev.= 5485.03
RUBY RIVER	37,612	36,156	37,612	37,137	37,844	101	105	5/5/2015	elev.=5393.2
TONGUE RIVER	79,071	51,121	45,515	56,093	66,537	84	130	5/4/2015	elev.=3424.9
W.F. BITTERROOT	32,362	20,328	29,937	20,019	32,362	100	159	4/27/2015	spilling
WILLOW CREEK	18,000	17,271	14,033	16,127	16,843	94	98	5/11/2015	elev.=4734.5
YELLOWATER	3,842	1,356	3,431	3,236	3,187	83	235	5/1/2015	elev.=3116.75

* Note: Reservoir contents include dead storage at the following:

Ackley	1001 AF	**	Tongue River	711 AF	(O&M storage table includes dead storage)
Cooney	90 AF	**	W. F. Bitterroot	656 AF	(O&M storage table includes dead storage)
Deadman's	3750 AF	**	Willow Creek	269 AF	(O&M storage table includes dead storage)
Nilan	900 AF	**			

** O&M slope storage table does not include dead storage (so dead storage has to be added into the storage from the table)

* Note: Cooney capacity reflects capacity after 1982 dam rehabilitation; prior capacity was 24,195 A.F.. Average storage shown is for post rehabilitation data.

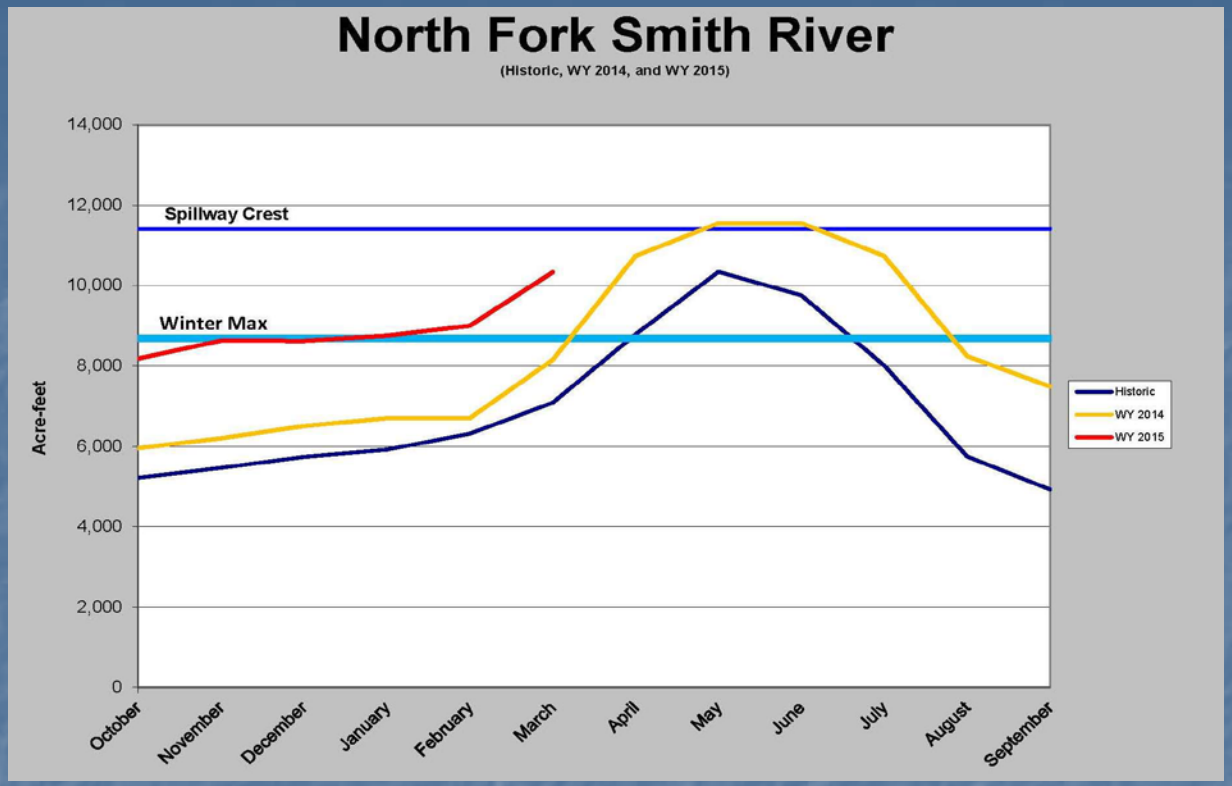
* Note: Middle Creek capacity reflects capacity after 1993 dam rehabilitation; prior capacity was 8,027 A.F.. Average storage shown is for post rehabilitation data.

* Note: Nevada Creek Reservoir Capacity reflects live storage capacity survey conducted in year 2000. Prior live storage capacity documented as 12,723 AF.

* Note: Tongue River capacity reflects capacity after 1999 dam rehabilitation; prior capacity was 68,040 A.F.. Average storage is post rehabilitation data.

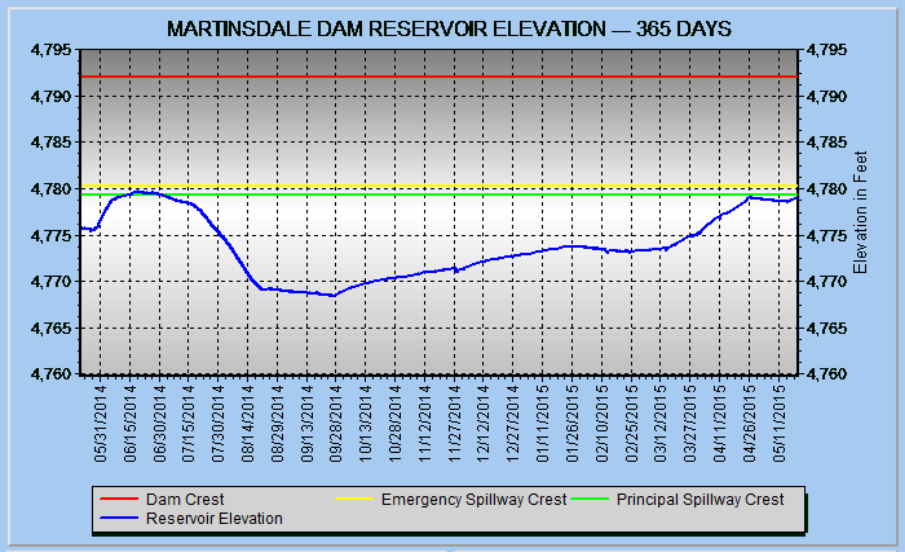
* Note: Frenchman Reservoir capacity tables updated based on aerial survey; prior capacity was 3752 A.F. Average shown is pre aerial survey

Montana DNRC State Water Projects Bureau Reservoirs



- 91% Capacity
- 118% average
- 10,399 Acre-Feet

Montana DNRC State Water Projects Bureau
Reservoirs



TIME OF LAST READING	5/21/2015 4:00:00 AM
RESERVOIR ELEVATION	4,779.0 FT
RESERVOIR VOLUME	23,077 AF

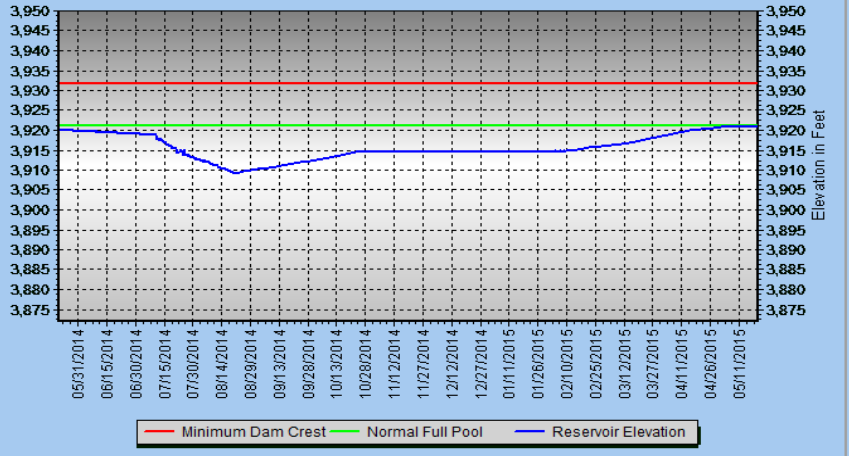
*NOTE: RESERVOIR ELEVATIONS BELOW 4759.78 FT ARE NOT VALID DUE TO INSTRUMENTATION LIMITATIONS.

REFERENCE INFORMATION	FT (MSL)	AC-FT
DAM CREST	4792.0	38,958
EMERGENCY SPILLWAY CREST	4780.25	24,350
PRINCIPAL SPILLWAY CREST	4779.25	23,348
TRANSDUCER CASE DEPTH	4759.78	8,444

*** PROVISIONAL DATA SUBJECT TO REVISION ***

- 99% Capacity
- 190% average
- 23,077 Acre-Feet
- Inflows=0 cfs
- Outflows=0 cfs

Montana DNRC State Water Projects Bureau Reservoirs



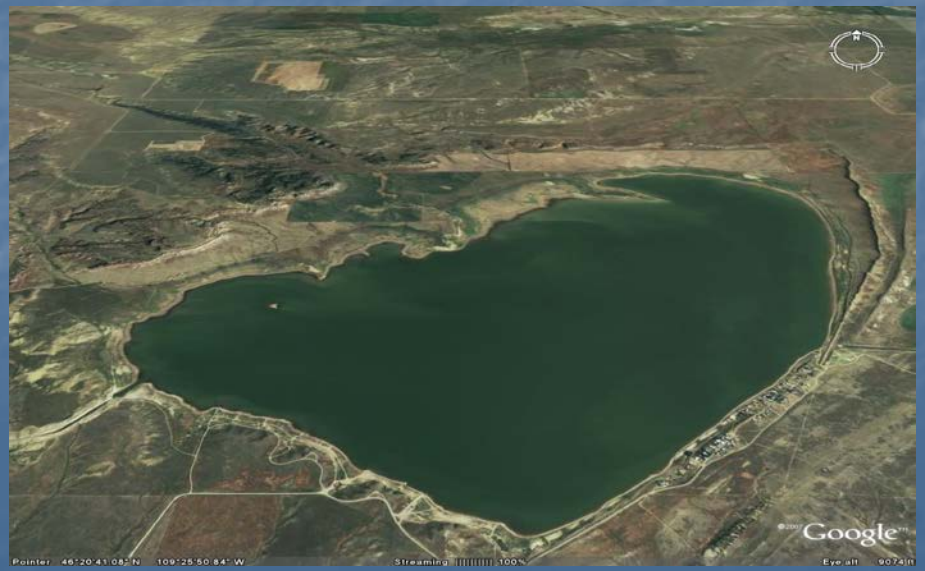
TIME OF LAST READING	5/21/2015 12:00:00 AM
RESERVOIR ELEVATION	3,920.9 FT
RESERVOIR VOLUME	72,046 AF
OPERATING GATE	10.4%
ISOLATION GATE	99.7%

GATEHOUSE TEMPERATURE	66.6 deg. F

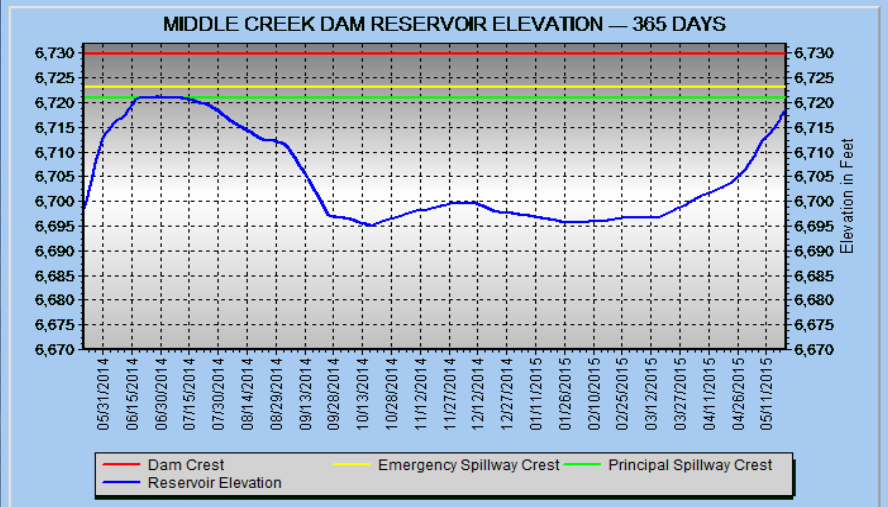
REFERENCE INFORMATION	FT (MSL)	AC-FT
MINIMUM DAM CREST	3931.7	100,000
NORMAL FULL POOL	3921.0	72,218
LOWEST USEABLE ELEVATION (DEAD STORAGE)	3872.0	0 (3,750)

*Data for Deadman's Basin Dam is preliminary. Presented data may not accurately represent the actual conditions.

- 99% Capacity
- 141% average
- 75,538 Acre-Feet (Total Storage)
- Elev.=3920.9



Montana DNRC State Water Projects Bureau Reservoirs

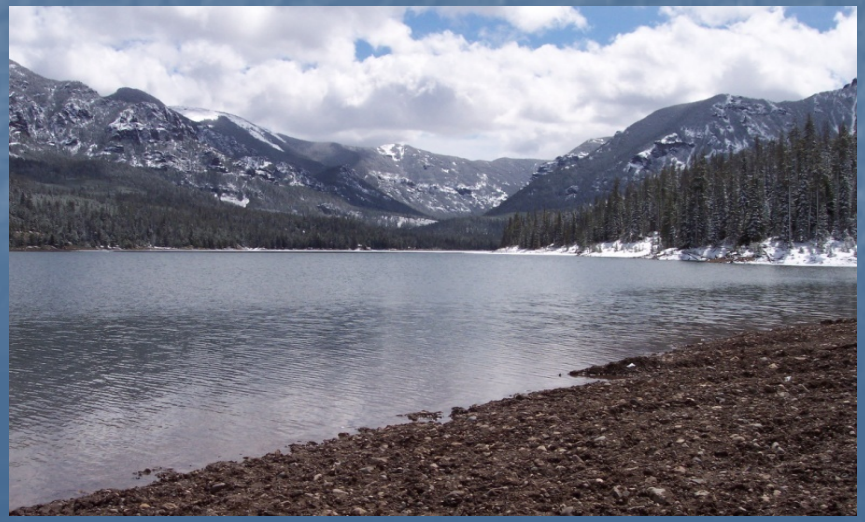


TIME OF LAST READING	5/21/2015 5:00:00 AM
RESERVOIR ELEVATION	6,718.6 FT
RESERVOIR VOLUME	9,583 AF
MIDDLE CREEK BELOW DAM	14.3 CFS
TIME OF LAST READING	5/21/2015 5:45:00 AM

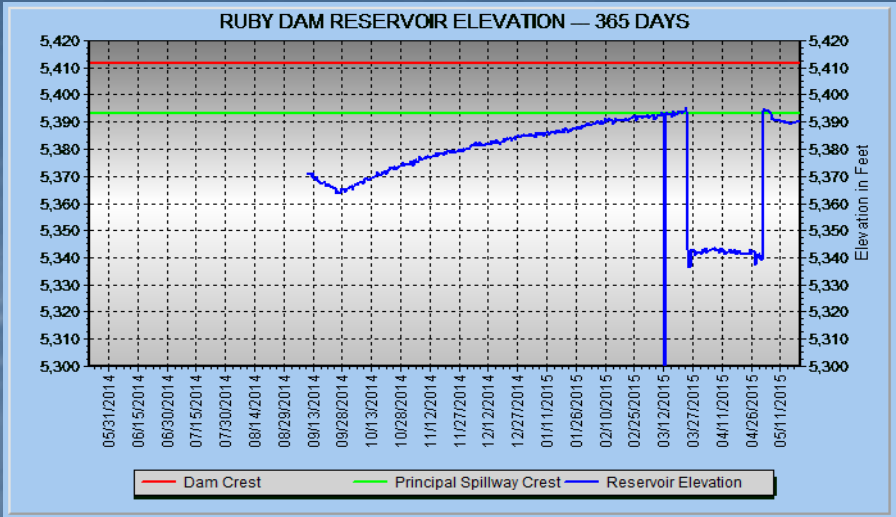
REFERENCE INFORMATION	FT (MSL)	AC-FT
DAM CREST	6730.0	12,790
EMERGENCY SPILLWAY CREST	6723.0	10,707
PRINCIPAL SPILLWAY CREST	6721.0	10,184
LOWEST USABLE ELEVATION	6637.0	0

*** PROVISIONAL DATA SUBJECT TO REVISION ***

- 93% Capacity
- 146% Average
- Outflows~14 cfs
- 9,583 Acre-Feet
- Elev.=6718.6



Montana DNRC State Water Projects Bureau Reservoirs



TIME OF LAST READING	5/21/2015 12:00:00 AM
RESERVOIR ELEVATION	5,389.9 FT
RESERVOIR VOLUME	34,634 AF
60 INCH VALVE GATE	32.1%
18 INCH VALVE GATE	-5.0%

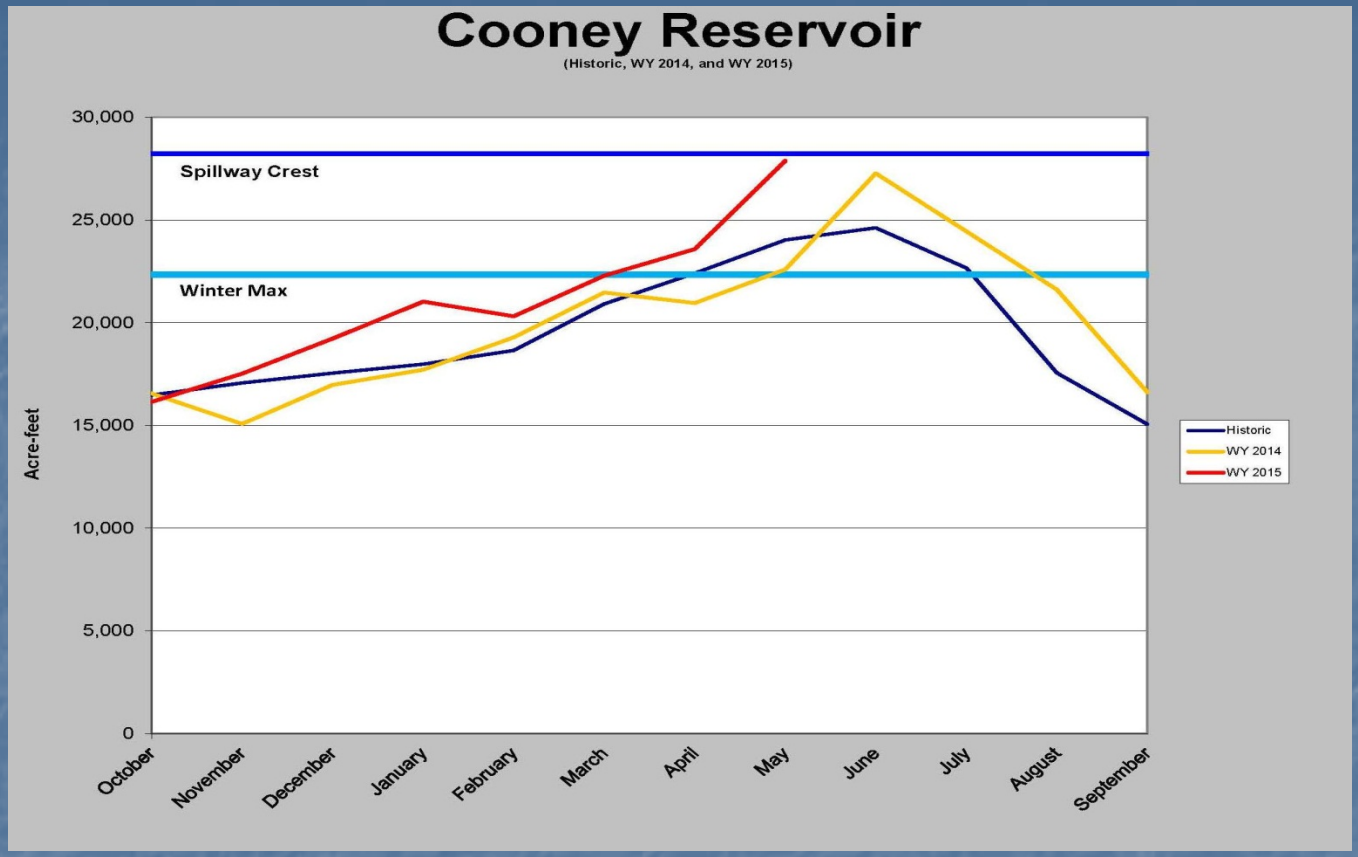
SPILLWAY SLIDE GATE	0.6%
VALVE GATE OUTFLOW (ESTIMATED)	288.3 CFS

REFERENCE INFORMATION	FT (MSL)	AC-FT
DAM CREST	5411.5	59,484
PRINCIPAL SPILLWAY CREST	5393.0	37,642

*Data for Ruby Dam is preliminary. Presented data may not accurately represent the actual conditions.

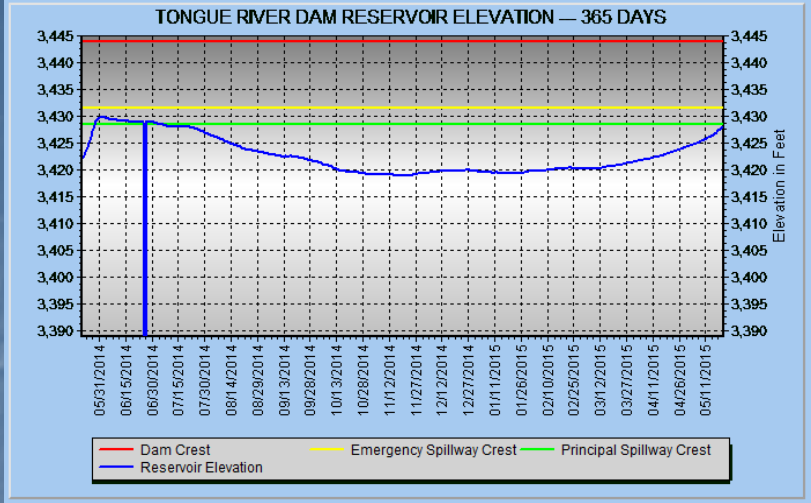
- 93% Capacity
- 97% average
- 34,634 Acre-Feet
- Elev.=5389.9
- Inflows=226 cfs
- Outflows=270 cfs

Montana DNRC State Water Projects Bureau Reservoirs



- 99% Capacity
- 124% average
- 27,878 Acre-Feet
- Elev.=4250.64
- Inflows= 361 cfs
- Outflows=66 cfs

Montana DNRC State Water Projects Bureau Reservoirs



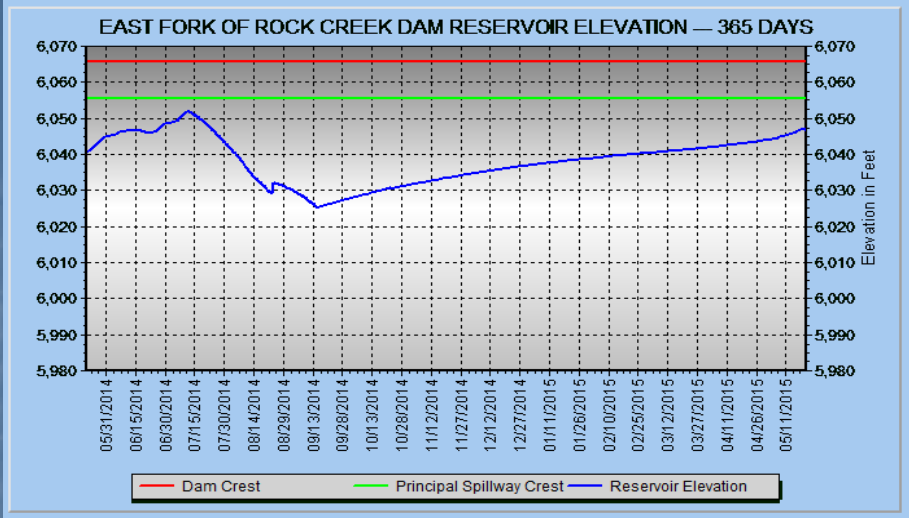
TIME OF LAST READING	5/21/2015 5:00:00 AM
RESERVOIR ELEVATION	3,428.1 FT
RESERVOIR VOLUME	78,962 AF
PRIMARY GATE	21.0%
SECONDARY GATE	1.0%

REFERENCE INFORMATION	FT (MSL)	AC-FT
DAM CREST	3444.0	150,000
EMERGENCY SPILLWAY CREST	3431.5	91,107
PRINCIPAL SPILLWAY CREST	3428.4	79,071
TOP OF LOW LEVEL INTAKE	3390.0	6,656

*** PROVISIONAL DATA SUBJECT TO REVISION ***

- 97% Capacity
- 150% Average
- 78,962 Acre-Feet
- Elev.=3428.1
- Inflows=833 cfs
- Outflows=345 cfs

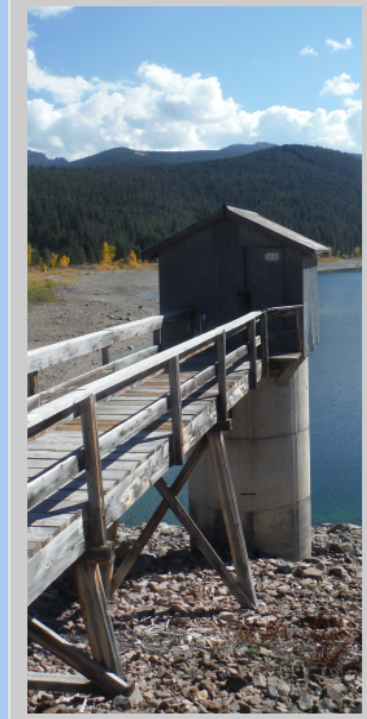
Montana DNRC State Water Projects Bureau Reservoirs



TIME OF LAST READING	5/21/2015 5:00:00 AM
RESERVOIR ELEVATION	6,046.7 FT
RESERVOIR VOLUME	12,730 AF

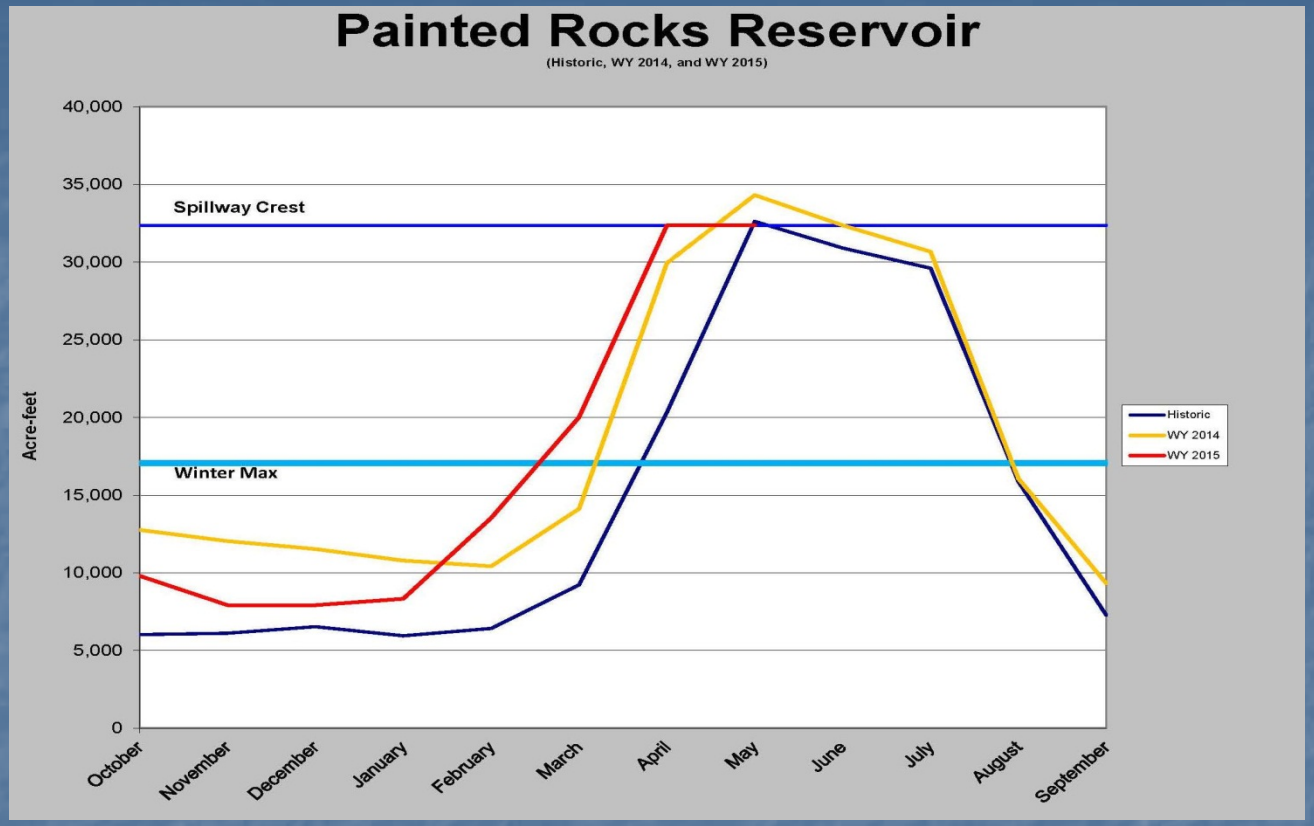
REFERENCE INFORMATION	FT (MSL)	AC-FT
DAM CREST	6065.6	19,850
PRINCIPAL SPILLWAY CREST	6055.5	16,040
LOWEST USABLE ELEVATION	5989.7	0

*** PROVISIONAL DATA SUBJECT TO REVISION ***



- 80% Capacity
- 132% average
- 12,730 Acre-Feet
- Elev.=6046.7

Montana DNRC State Water Projects Bureau Reservoirs



- 100% Capacity
- 100 % average
- 32,362 Acre-Feet
- Elev.=4725.5
- Inflows~1,050 cfs
- Outflows=1,050 cfs

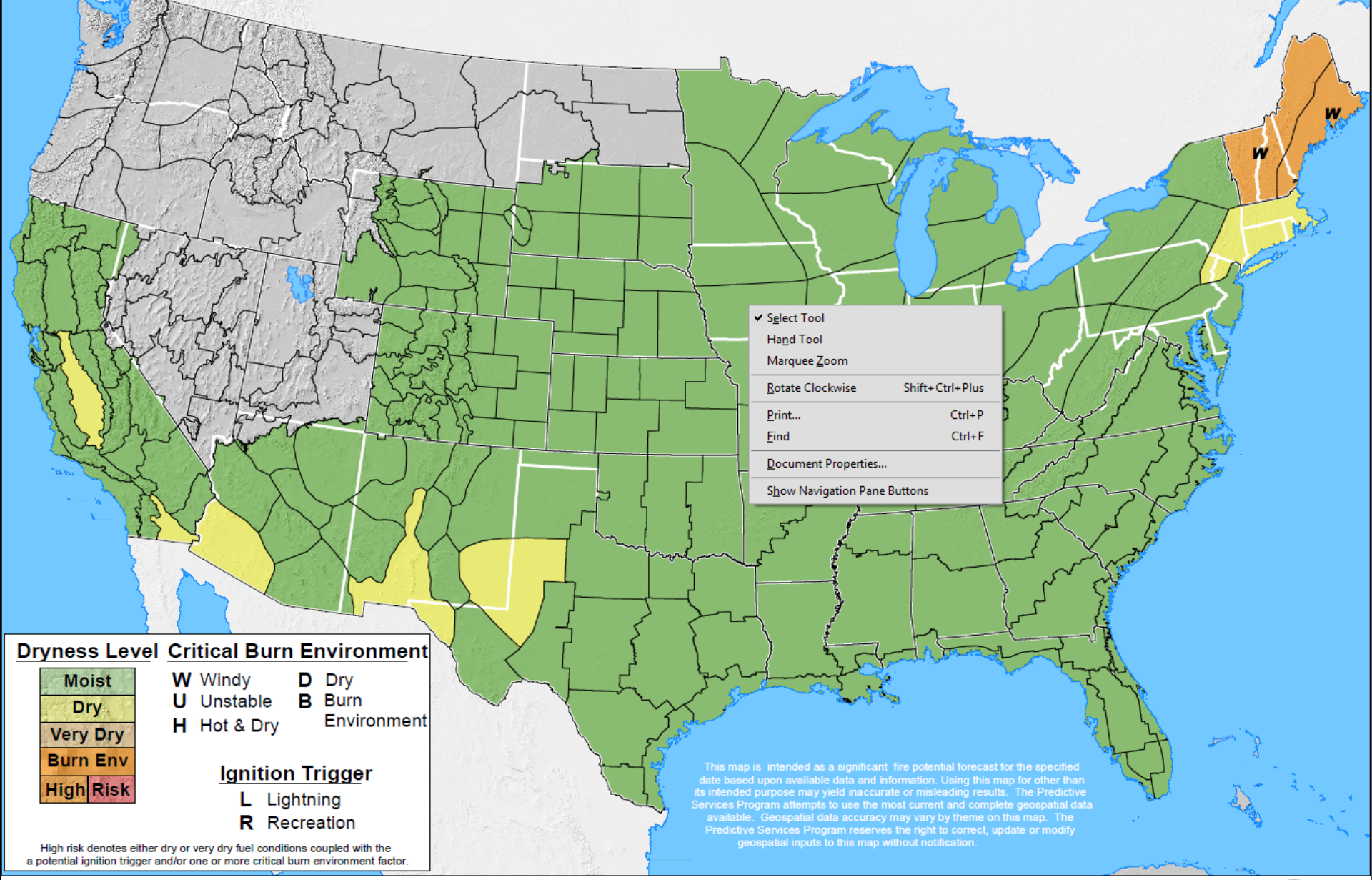
Summary

- Maximum Winter Carryover was maintained across majority of State Water Projects
- Majority of Reservoirs are steadily filling or near/at capacity
- State Water Projects Reservoirs are above to well above average for May and ahead of last year
- Dry spring conditions in conjunction with below average snowpack could potentially result in above average drawdown rates throughout the irrigation season
- Water Users are anticipating shortages due to snowpack conditions at select reservoirs

Governor's Drought & Water Supply Advisory Committee
May NRCC Update

Harold Gemmell, Direct Fire Protection Coordinator
DNRC

hgemmell@mt.gov 406 329-4996



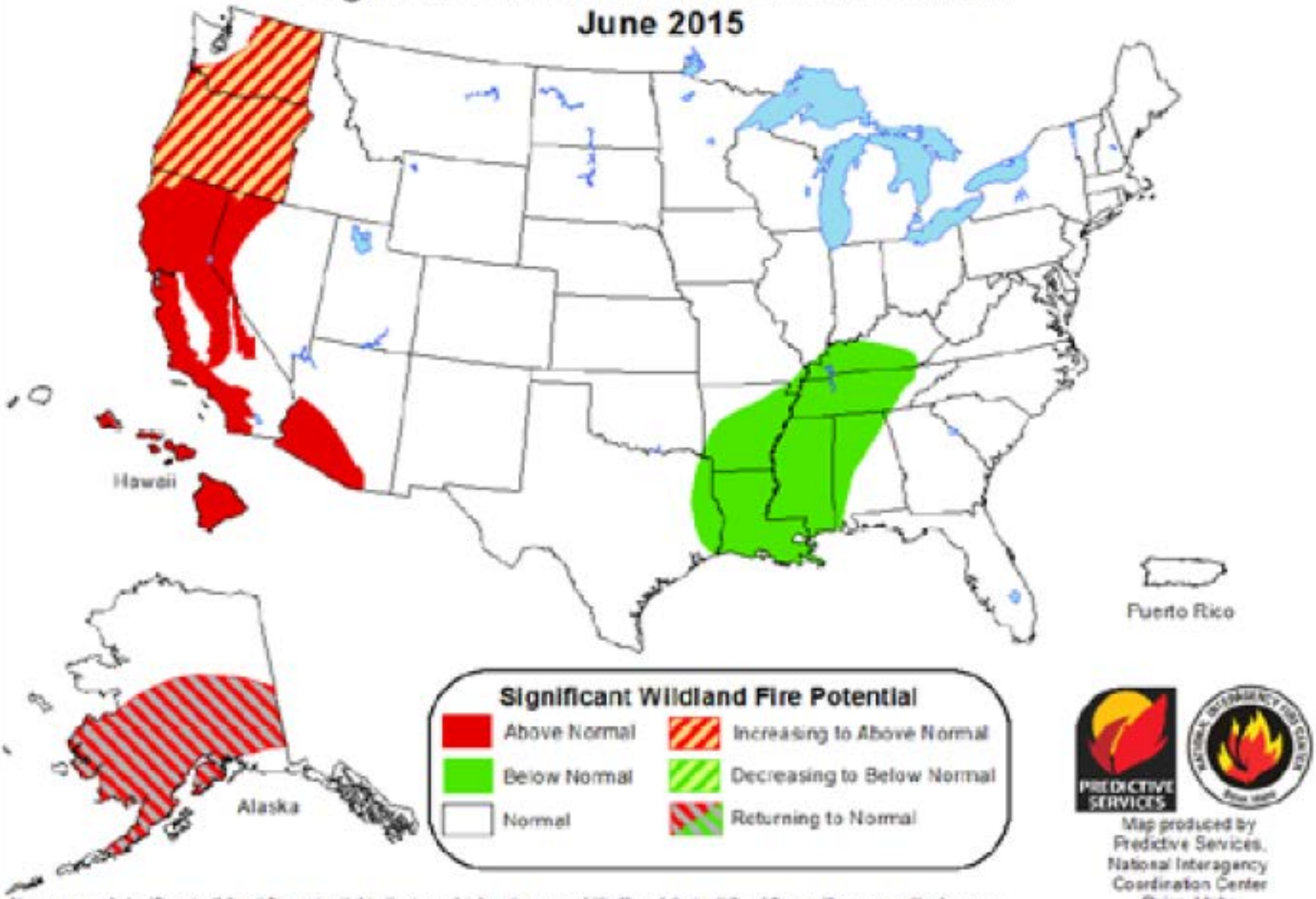
SIGNIFICANT FIRE POTENTIAL

Valid For: Monday, May 18, 2015

Issued On: Monday, May 18, 2015 12:20 PM (MT)

Map produced by USDA Forest Service Remote Sensing Applications Center in Coordination with National Predictive Services Program

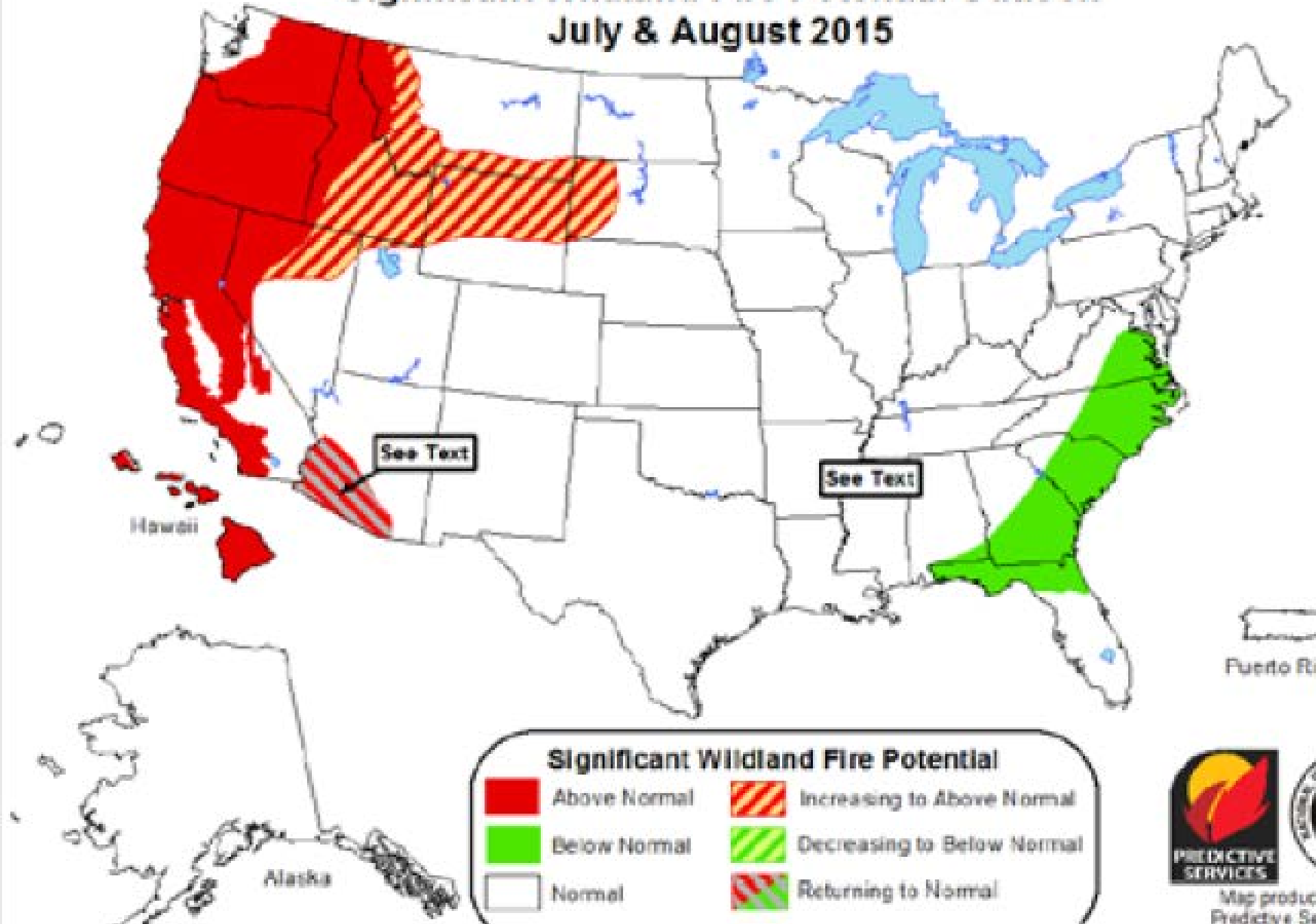
Significant Wildland Fire Potential Outlook
June 2015



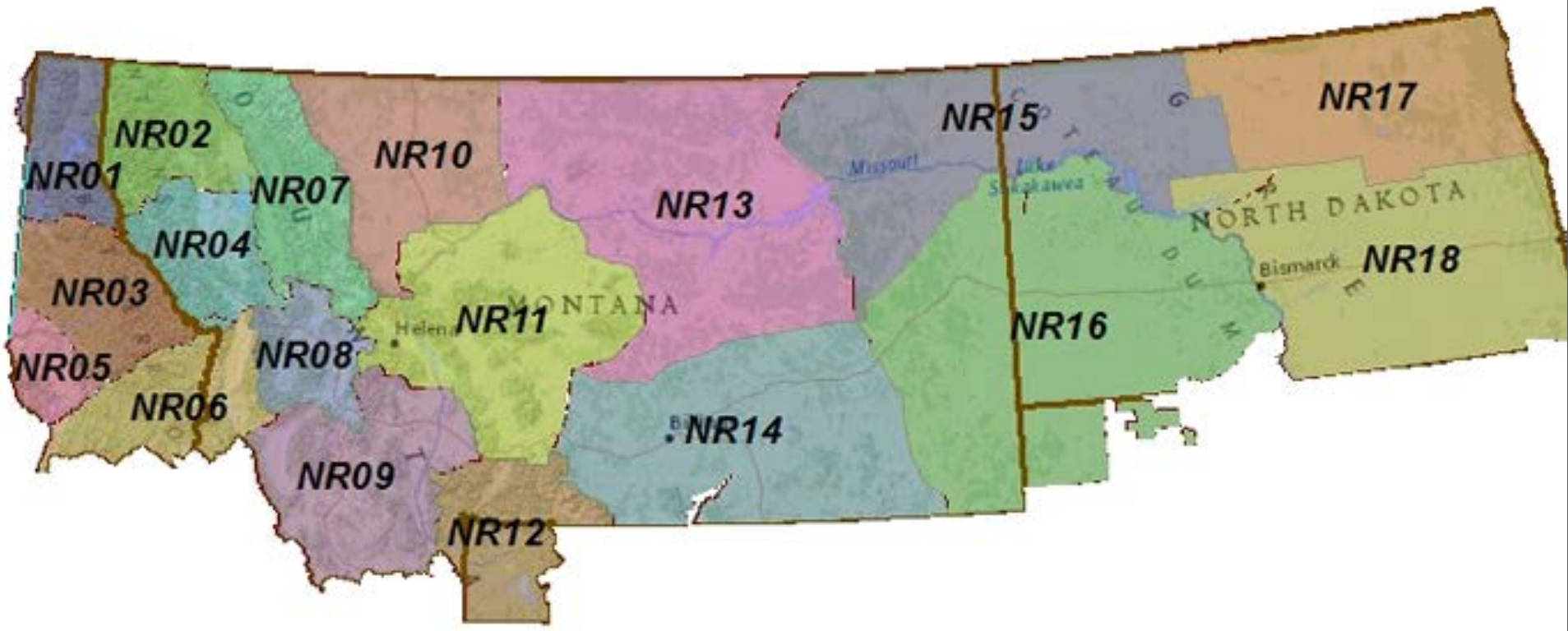
Above normal significant wildland fire potential indicates a higher than usual likelihood that wildland fires will occur and/or become significant events. Wildland fires are still expected to occur during forecasted normal conditions as would usually be expected during the outlook period. Significant wildland fires are still possible but less likely than usual during forecasted below normal periods.

Map produced by
Predictive Services,
National Interagency
Coordination Center
Boise, Idaho
Issued May 1, 2015
Next issuance June 1, 2015

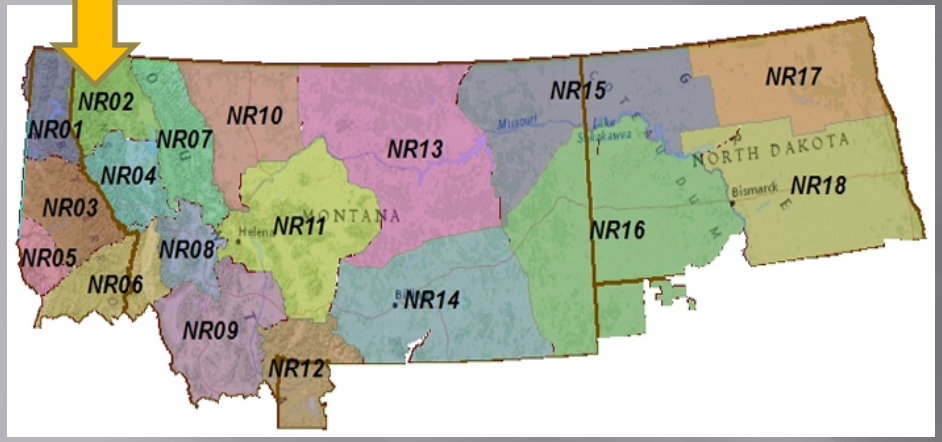
Significant Wildland Fire Potential Outlook
July & August 2015



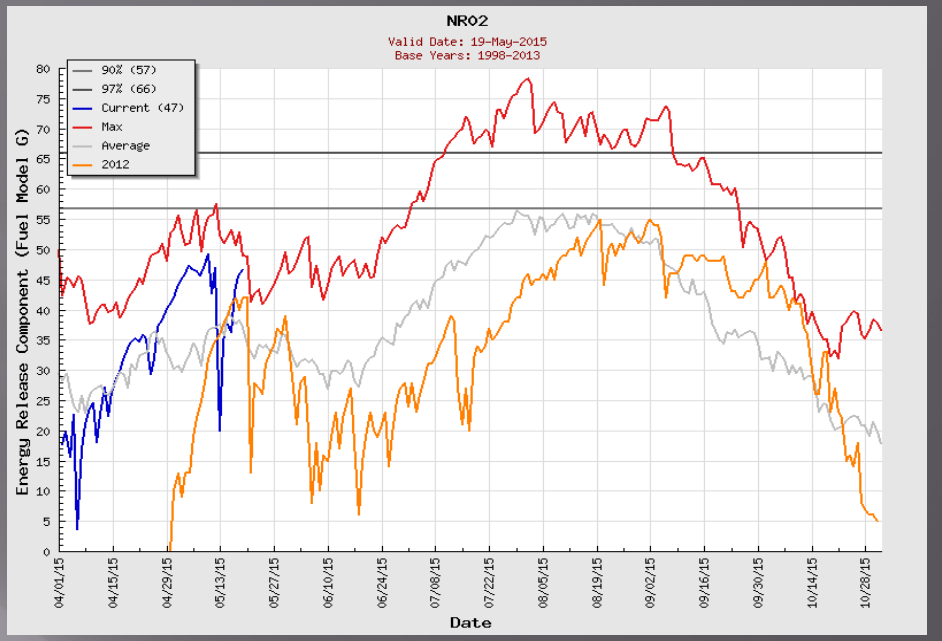
NORTHERN ROCKIES GEOGRAPHIC AREA
PREDICTIVE SERVICE AREAS

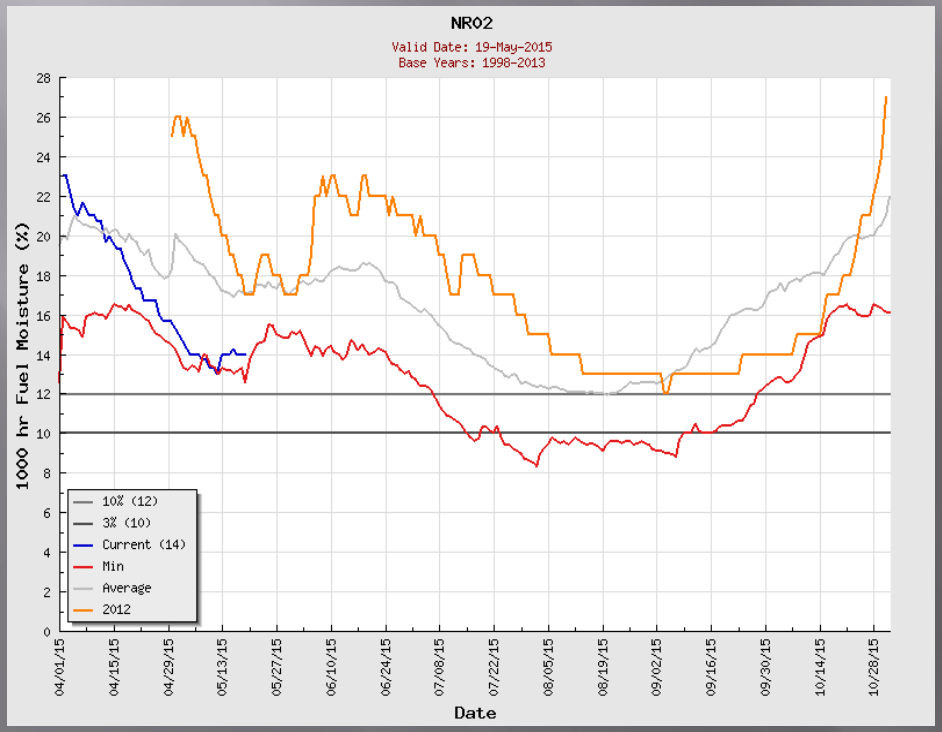


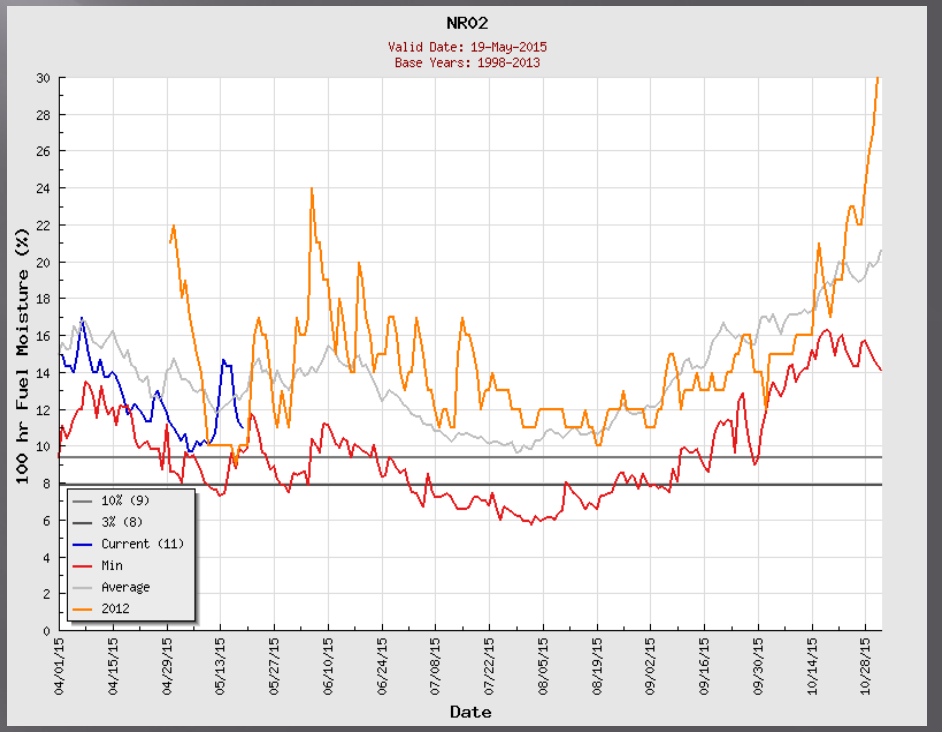
NR02 - Northwestern Montana



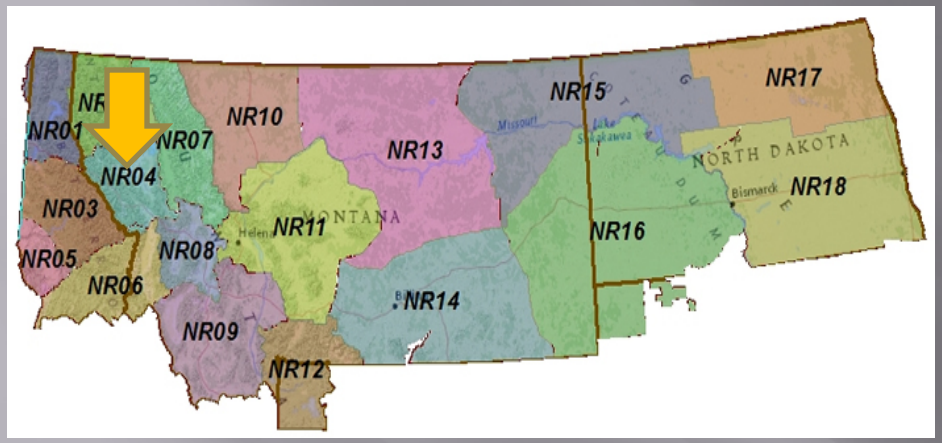
Libby Ranger Station
Troy Ranger Station
Eureka Ranger Station





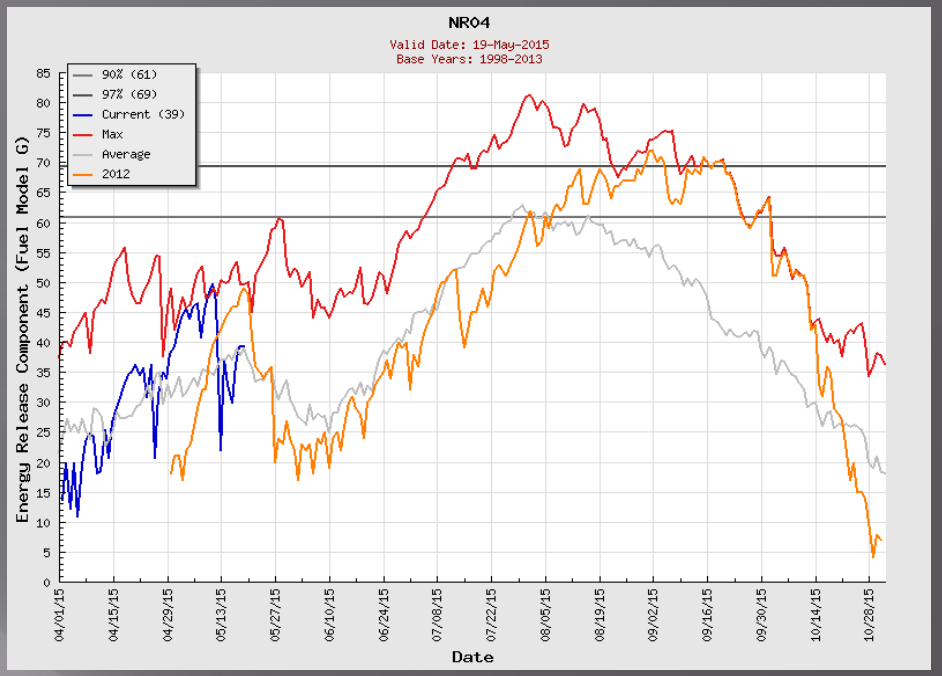


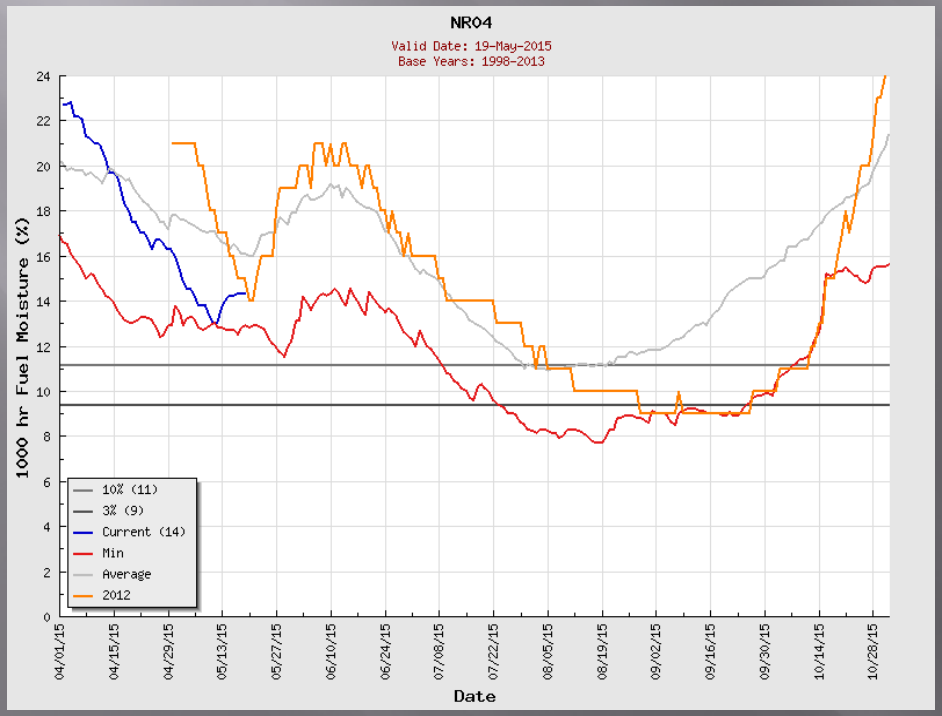
NR04 – Western Montana

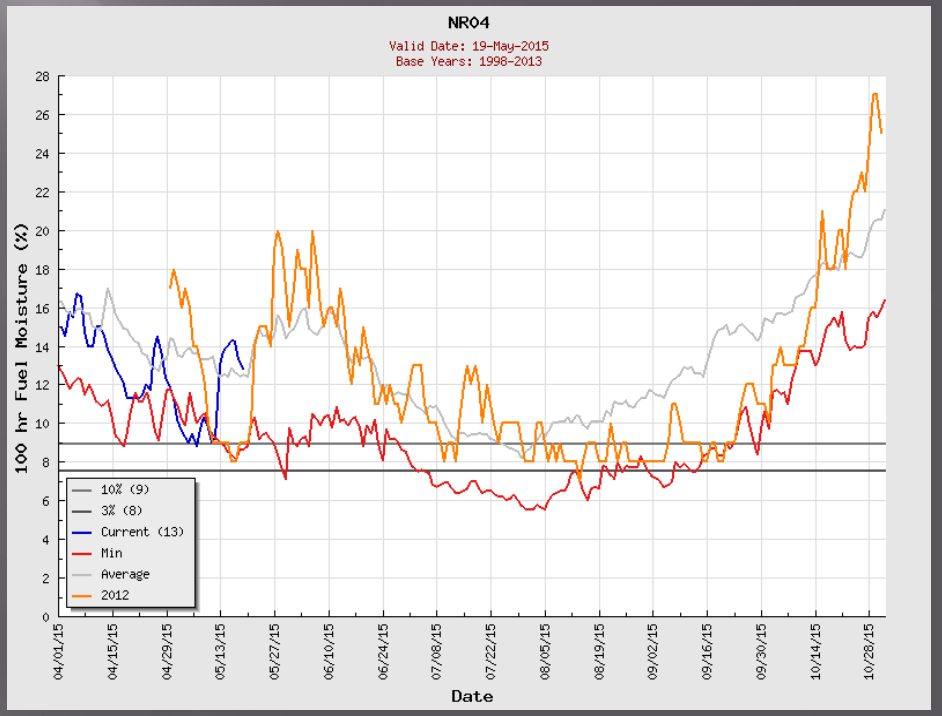


Plains
Missoula
St. Regis

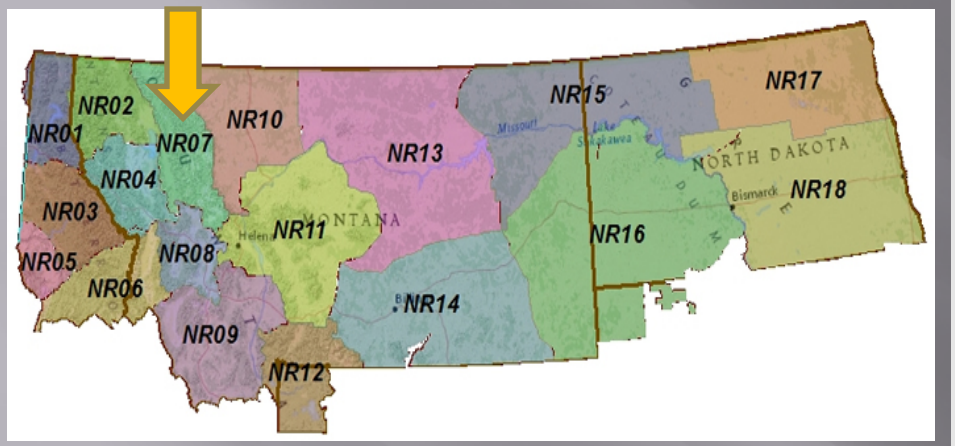
Hot Springs
Nine Mile



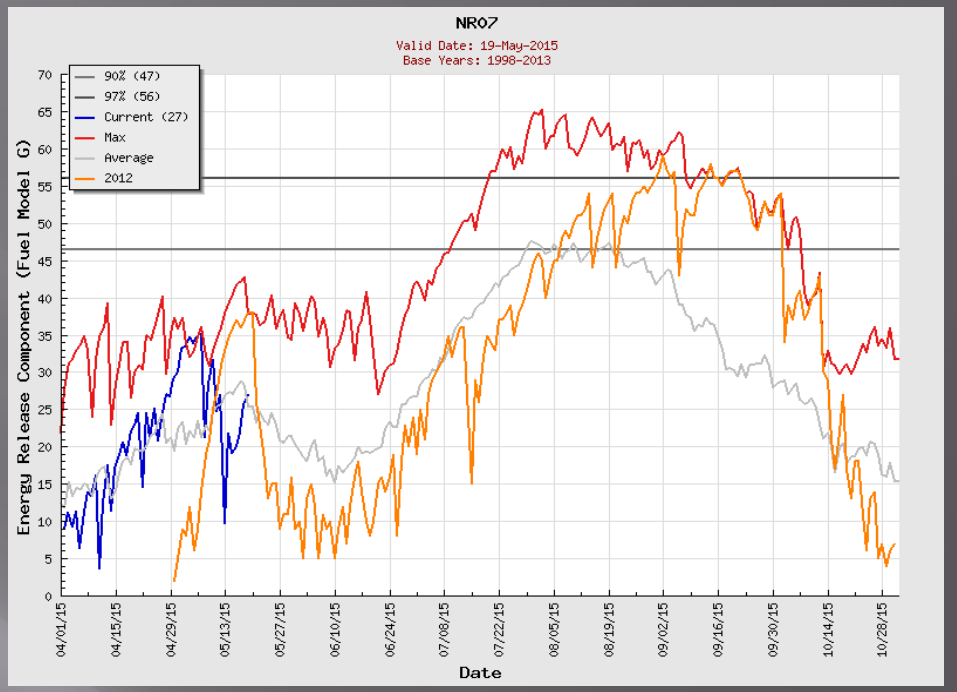


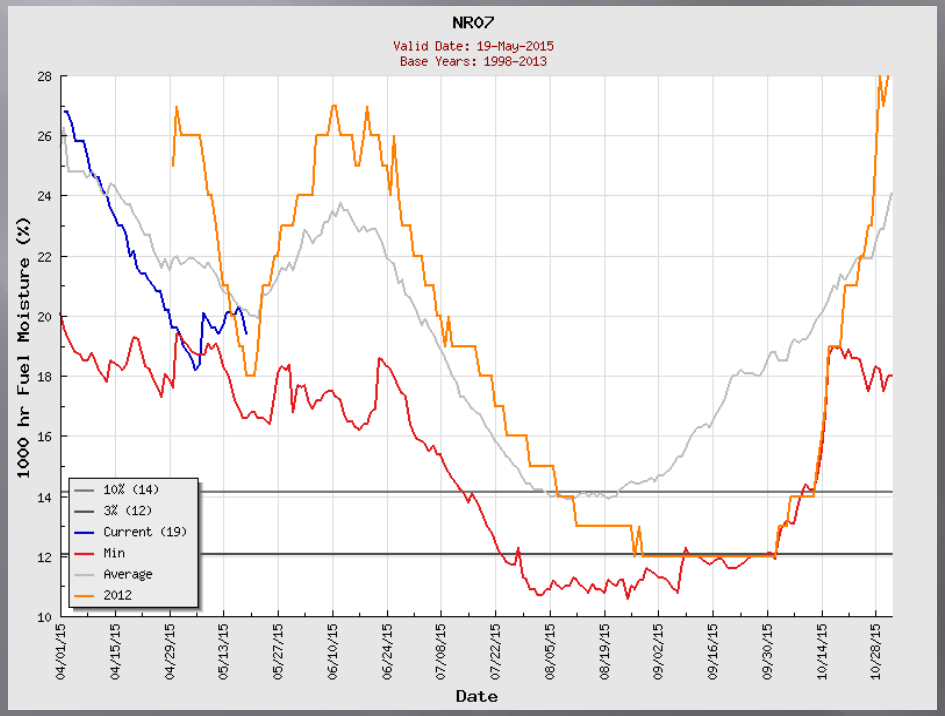


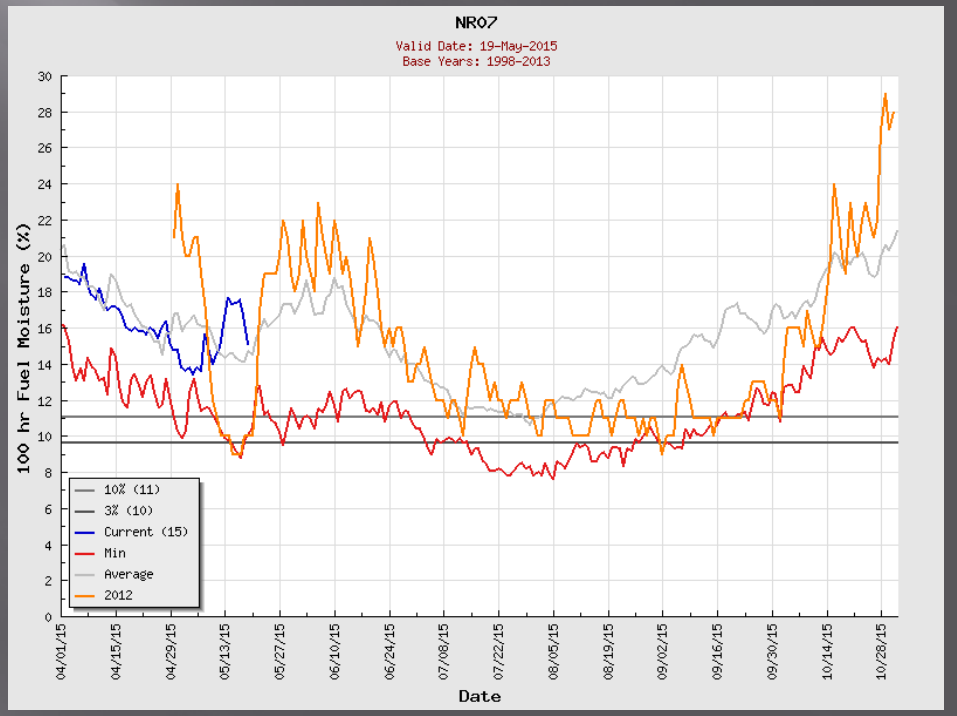
NR07 - Glacier National Park and Wilderness Areas



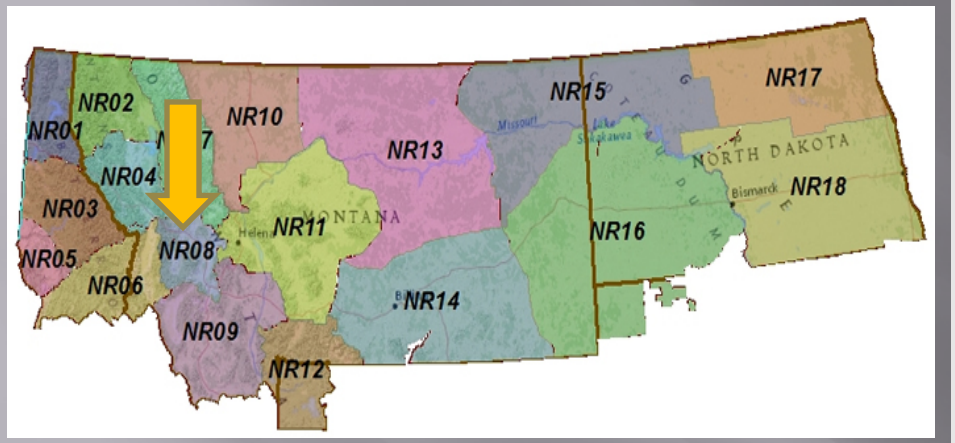
West Glacier
Cyclone
Condon Work Center
Hungry Horse
Benchmark



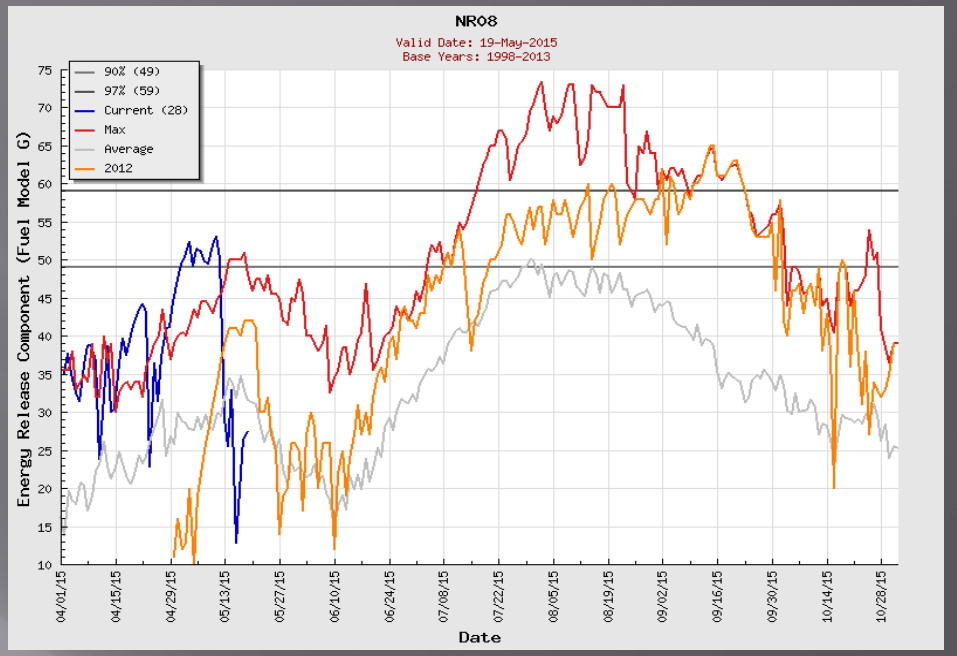


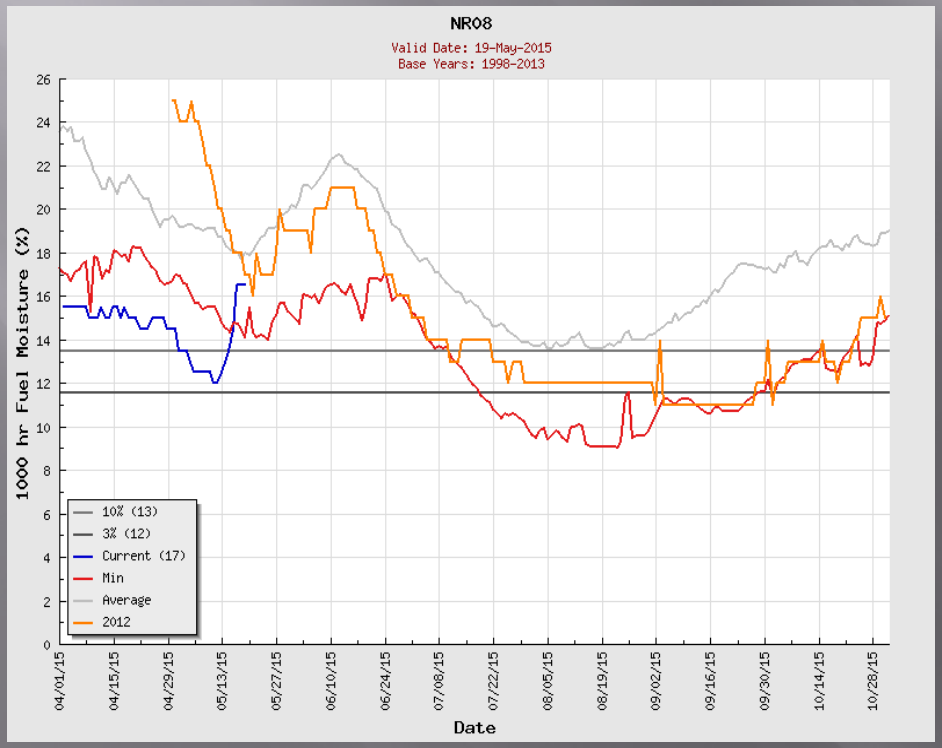


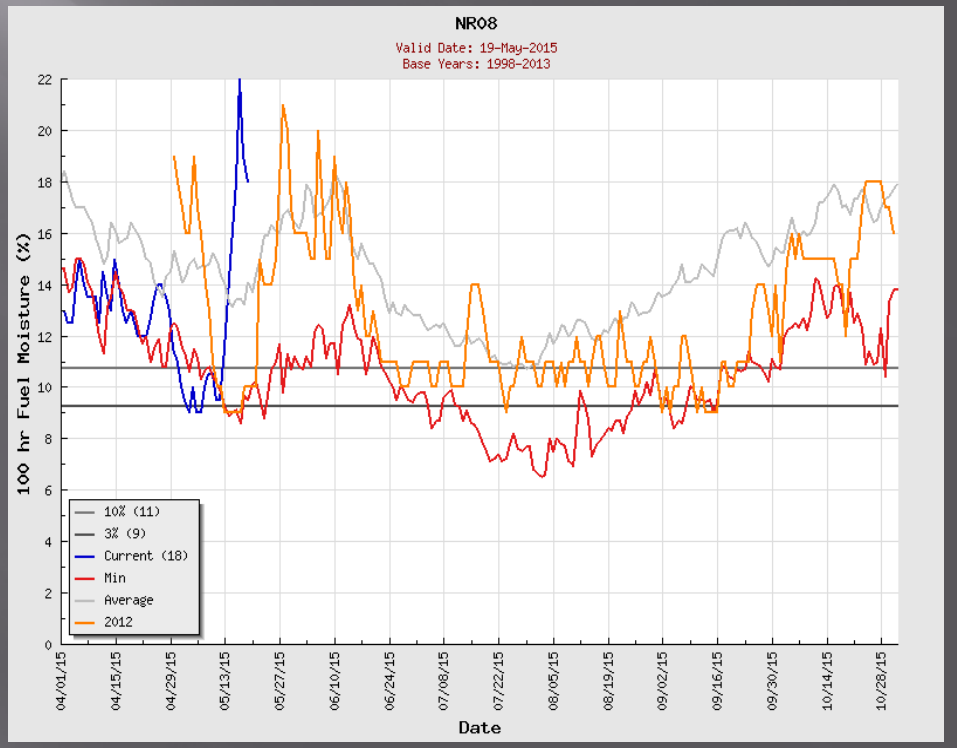
NR08 – Southwest Montana, West of Continental Divide



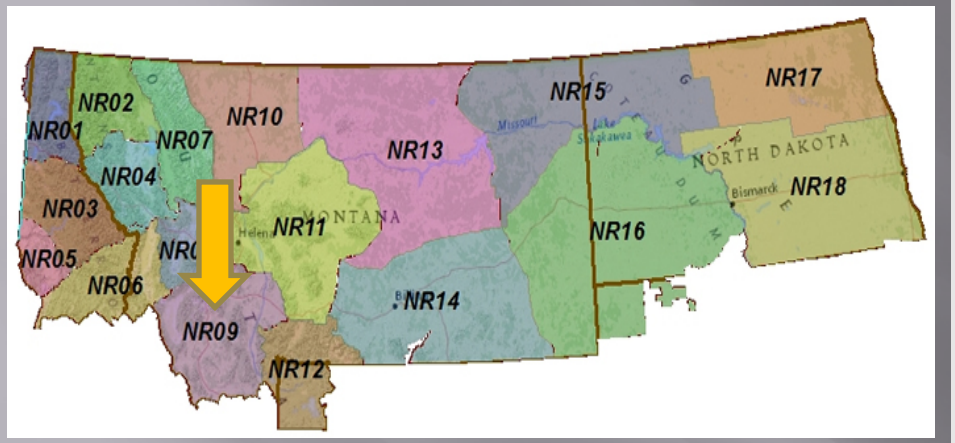
Lincoln
Phillipsburg





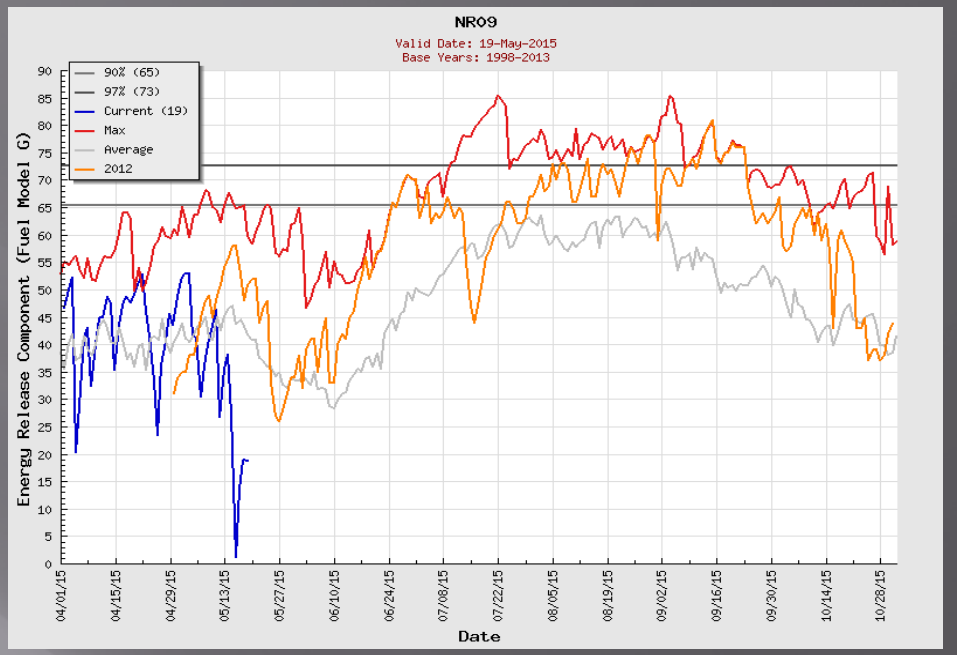


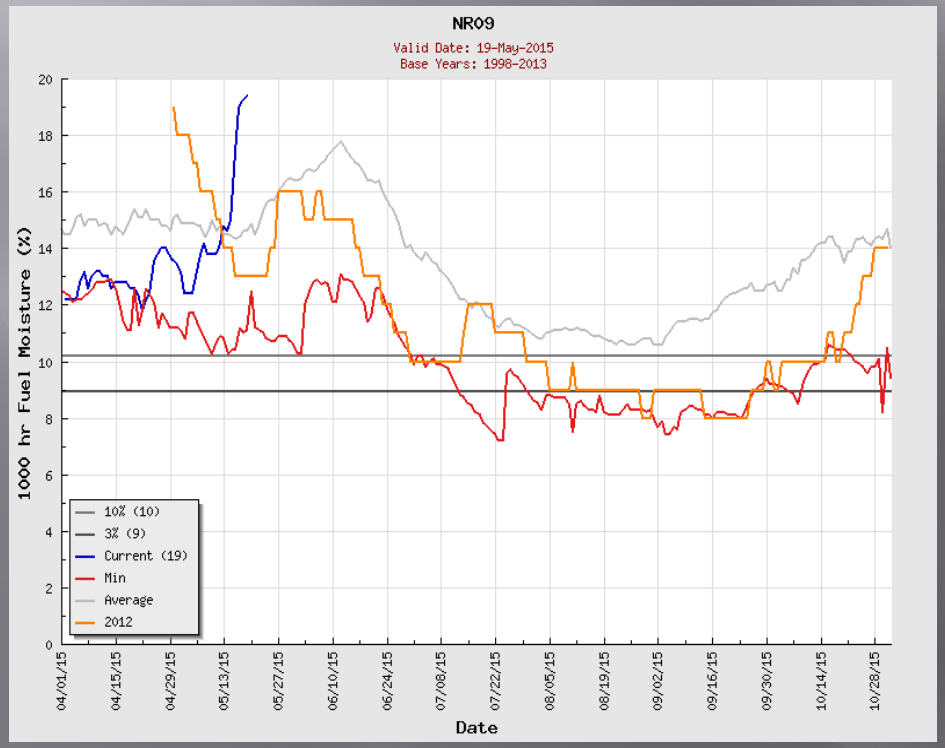
NR09 – Big Hole, Southwest Montana East of Continental Divide

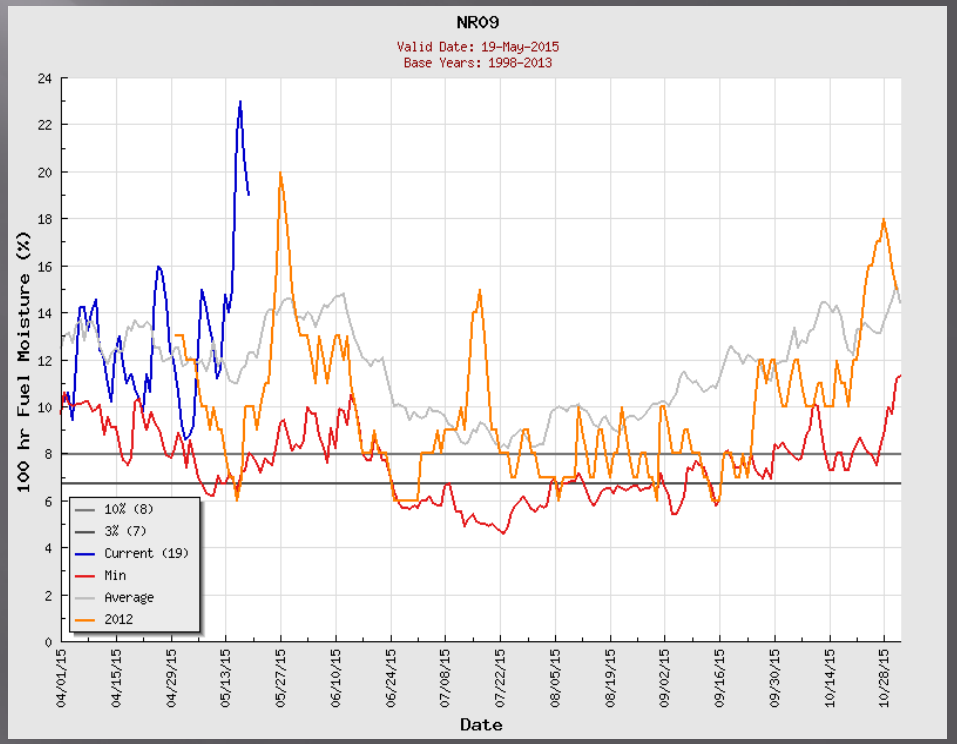


Jefferson
Brenner

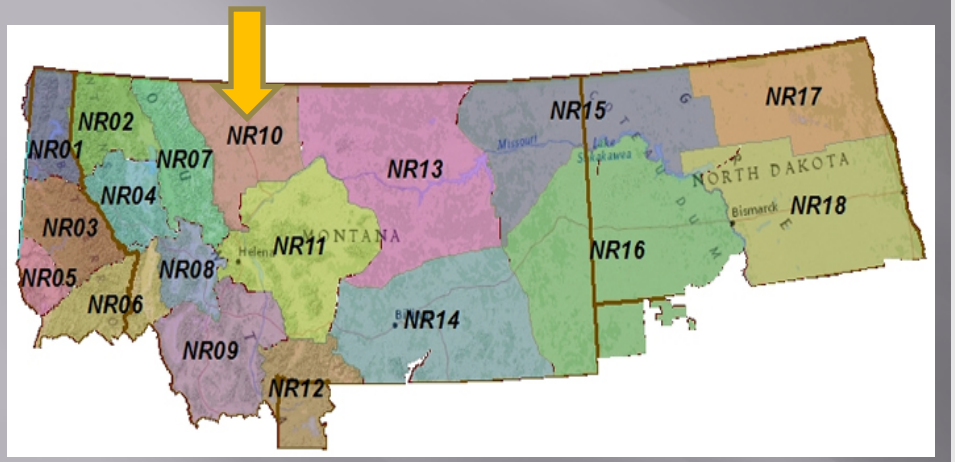
Ennis
Wise RIver



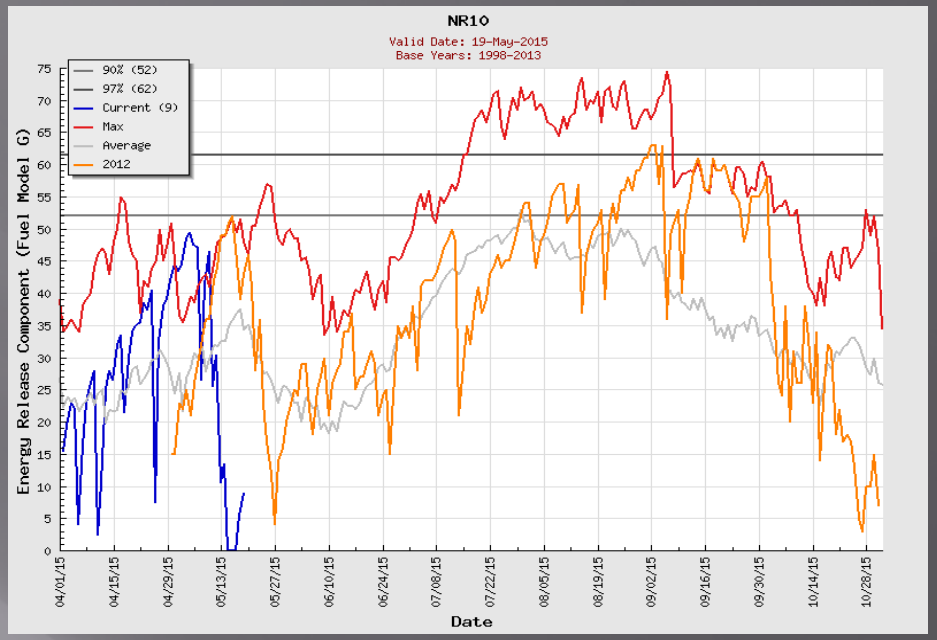


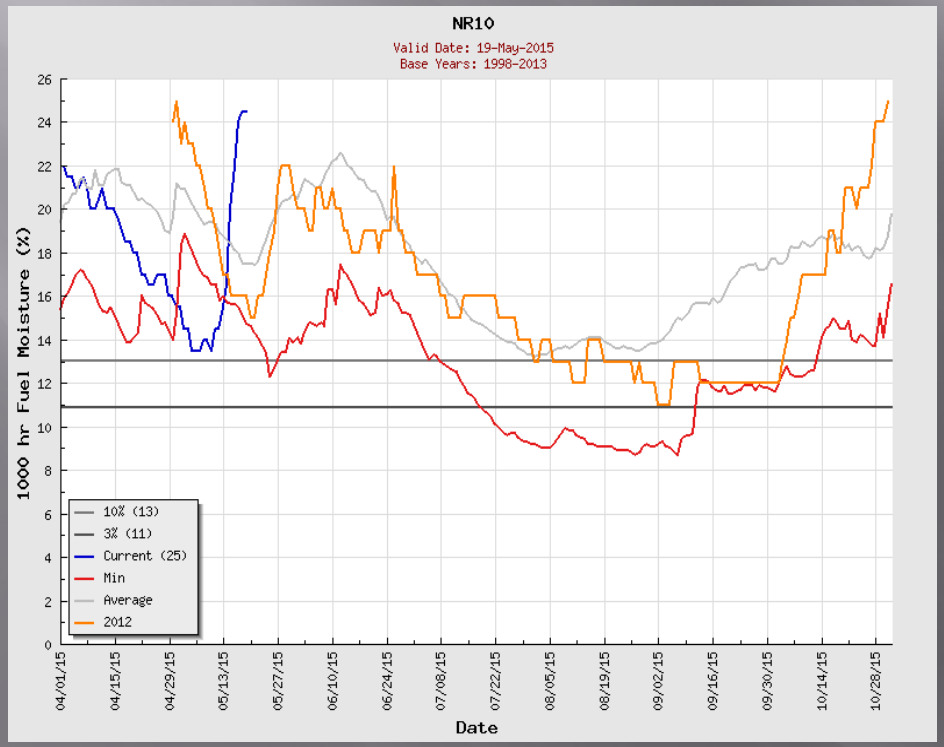


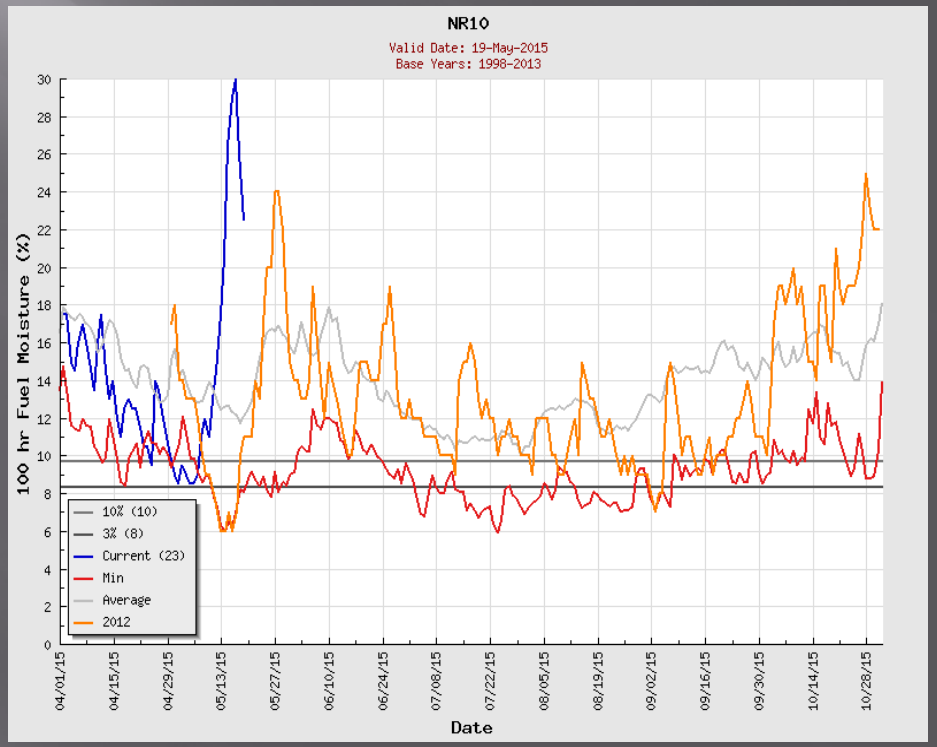
NR10 – Northern Front Range



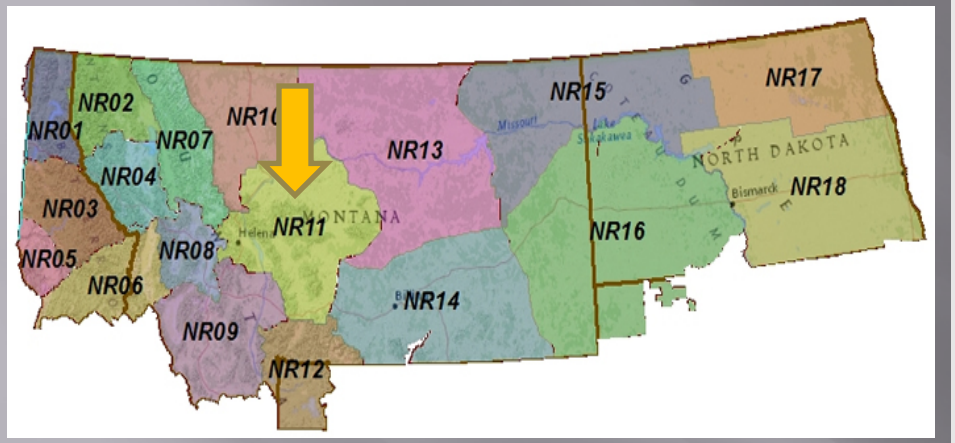
St. Mary
Gleason



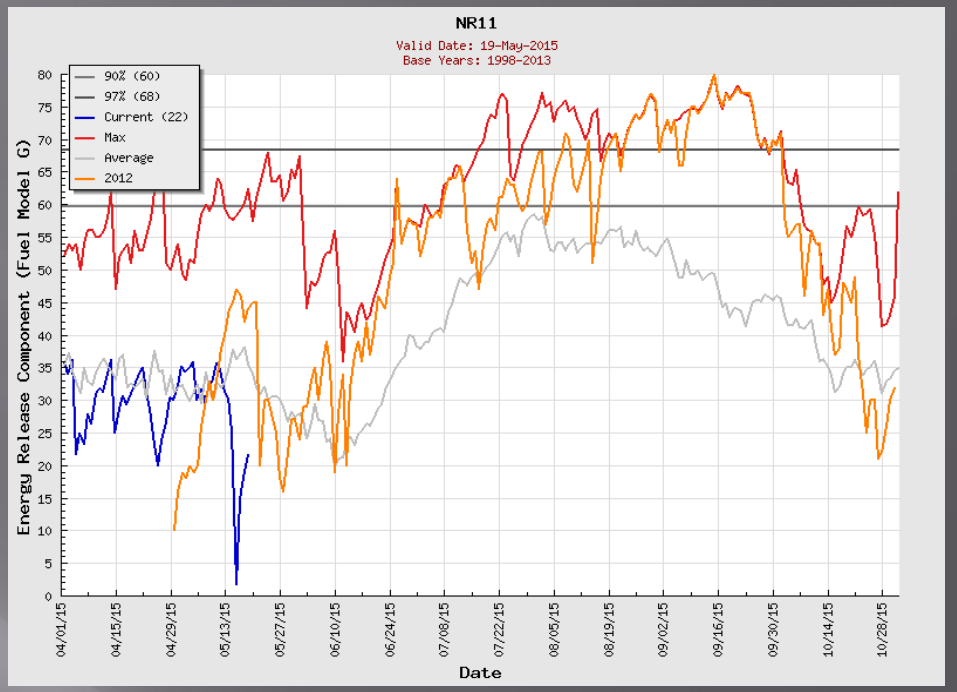


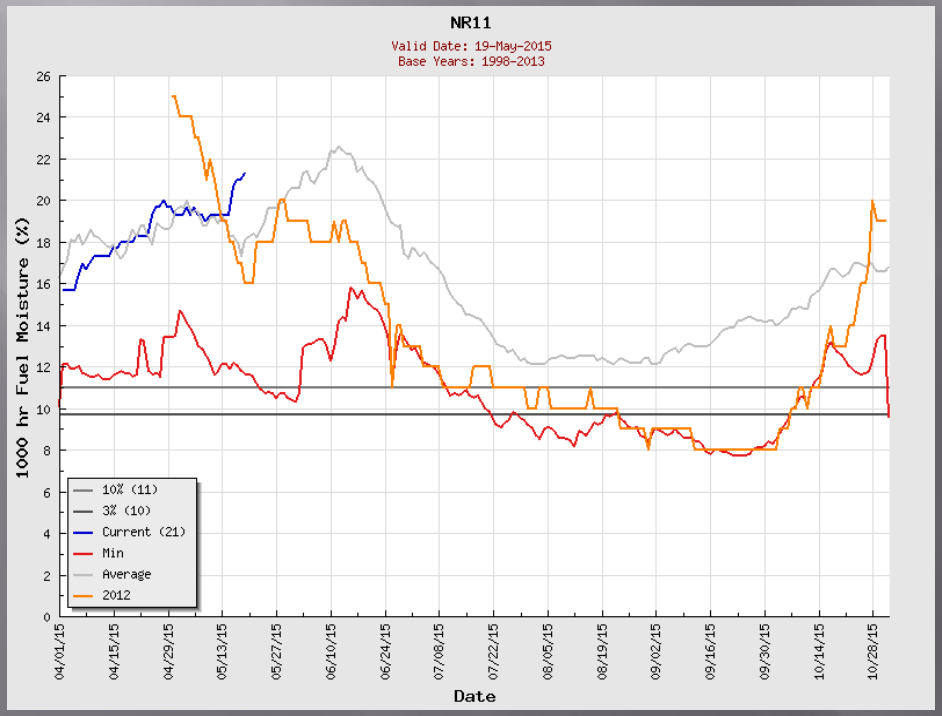


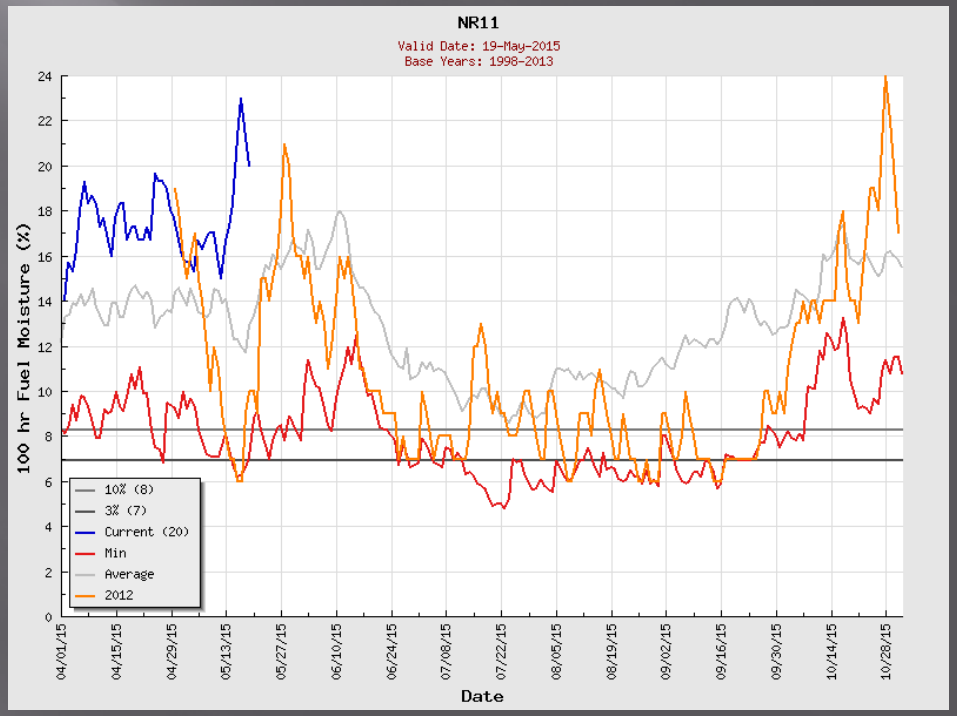
NR11 – West Central Montana



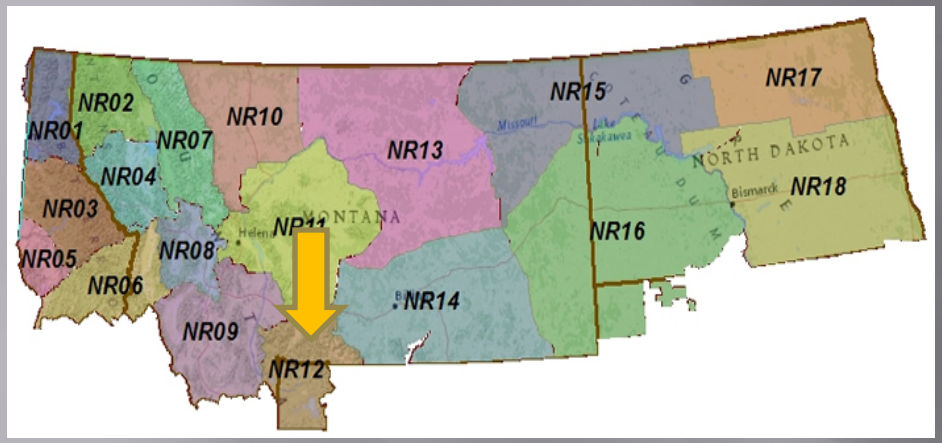
Helena
Porphyry
White Sulphur Springs



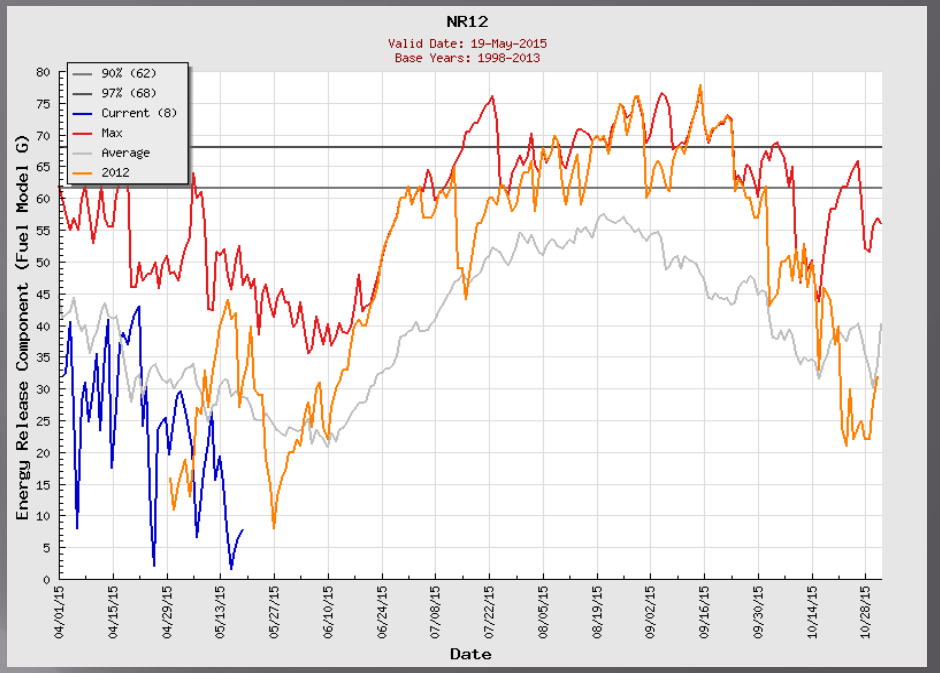


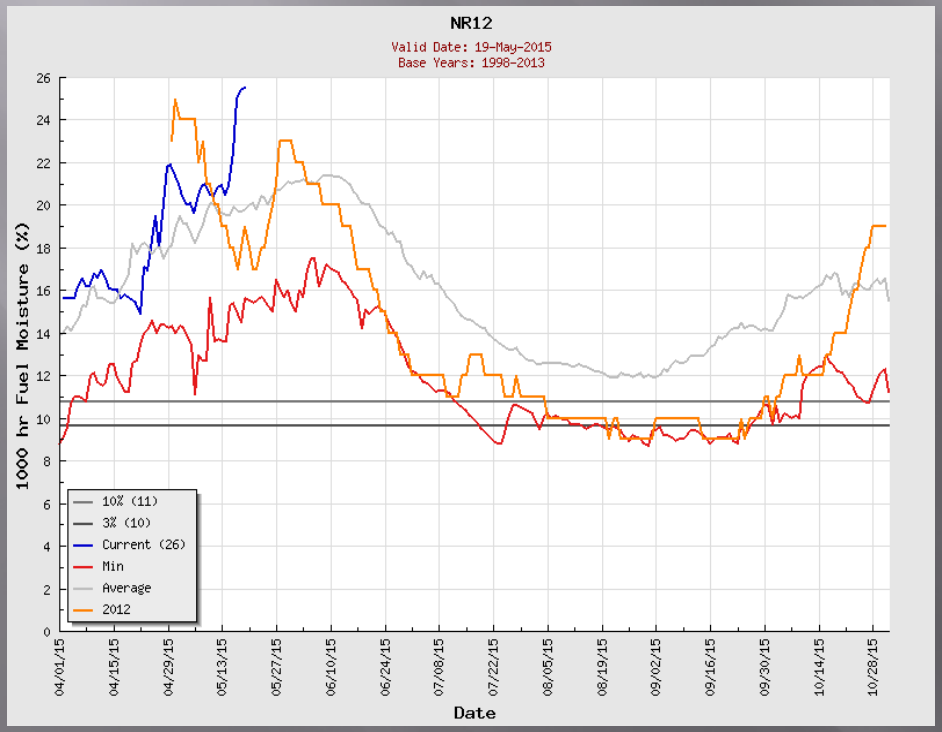


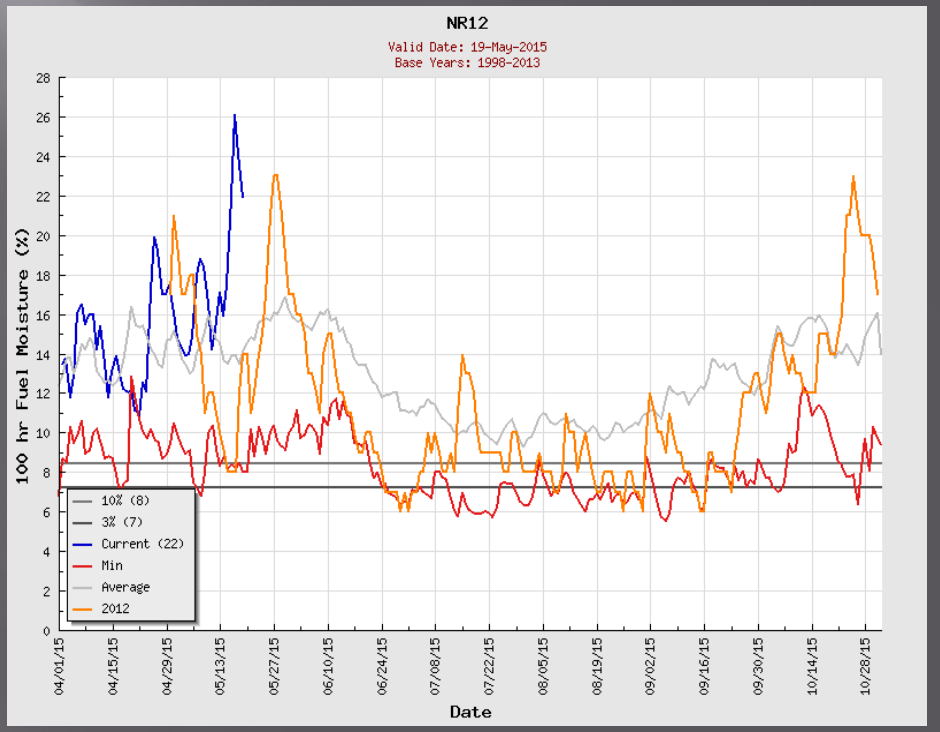
NR12 – South Central Montana and Yellowstone YP



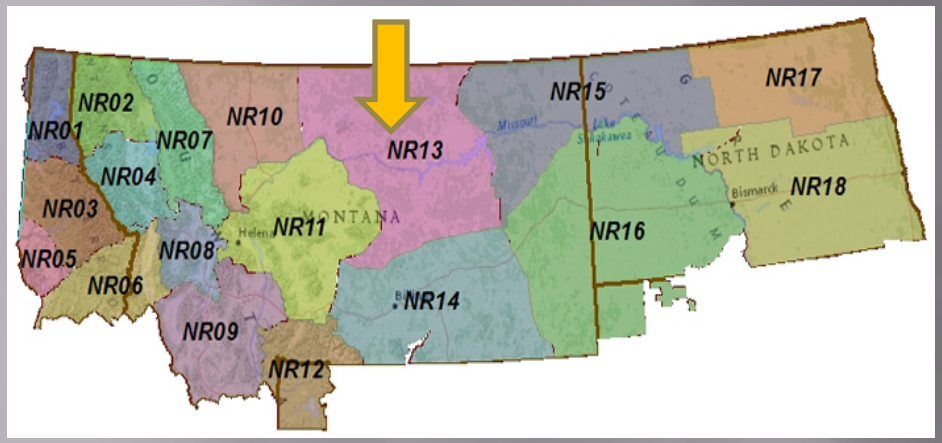
Shenango
Fishtail
Bechler
Hebgen Lake
Timbercrest
Quadrant



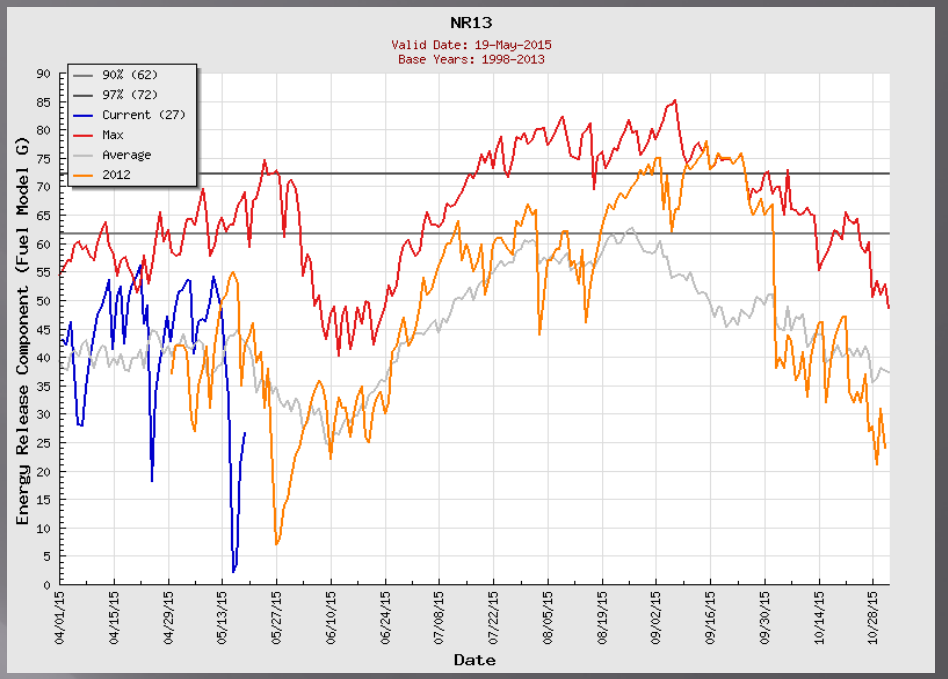


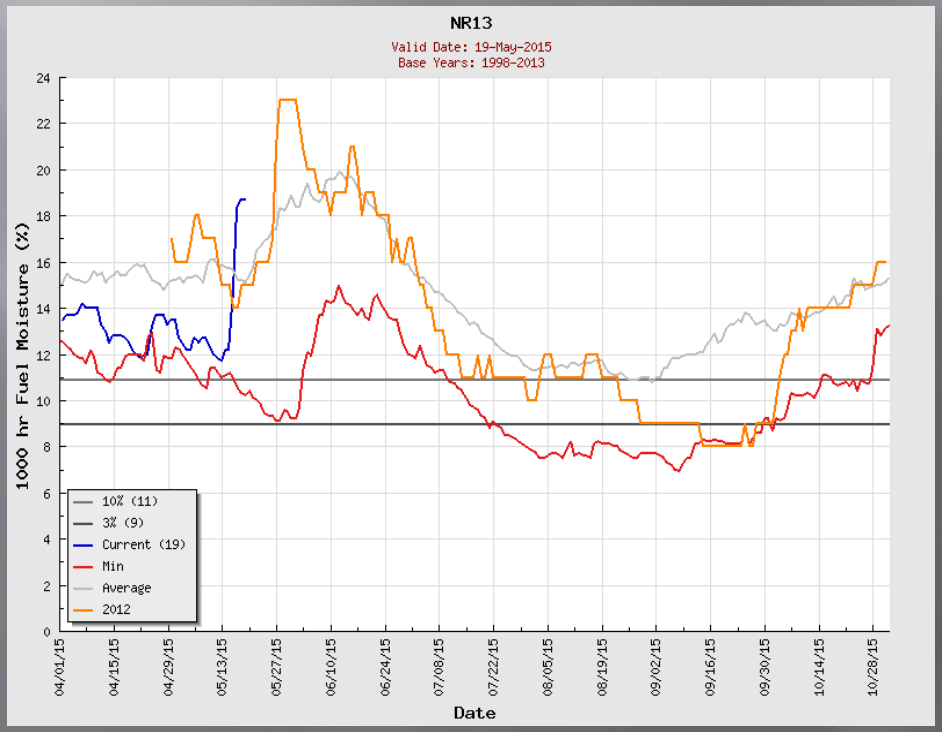


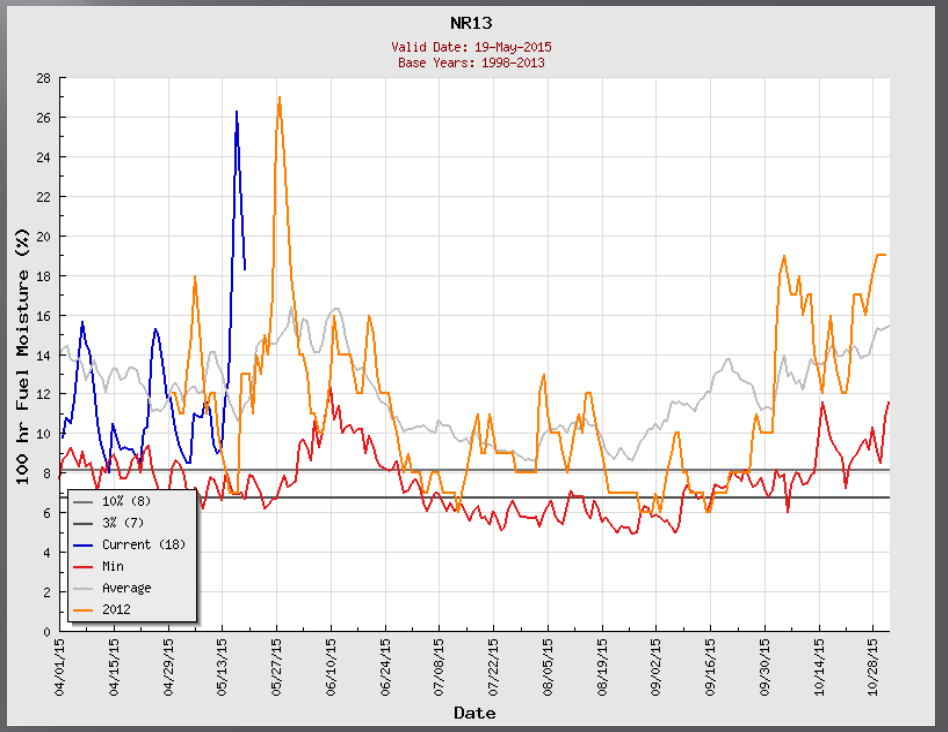
NR13 – Northern Plains and Missouri Breaks



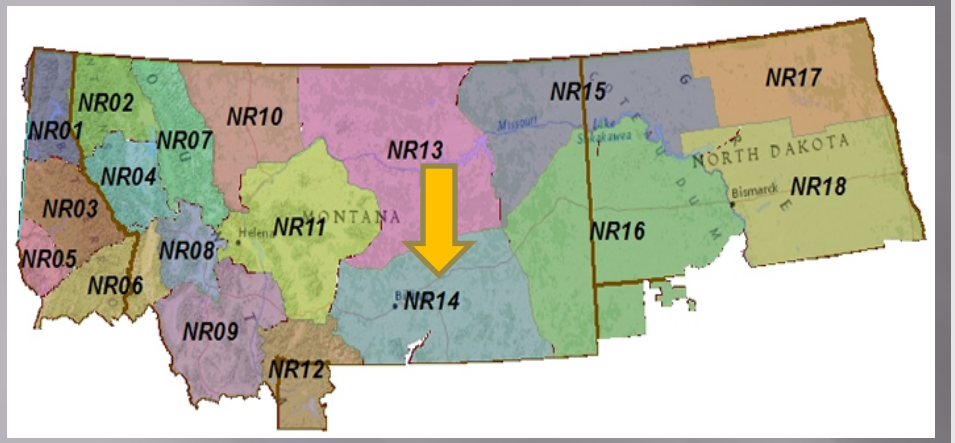
Rocky Boy
Bluff Creek
Armells Creek
Little Bullwhacker
King Coulee
South Sawmill Creek





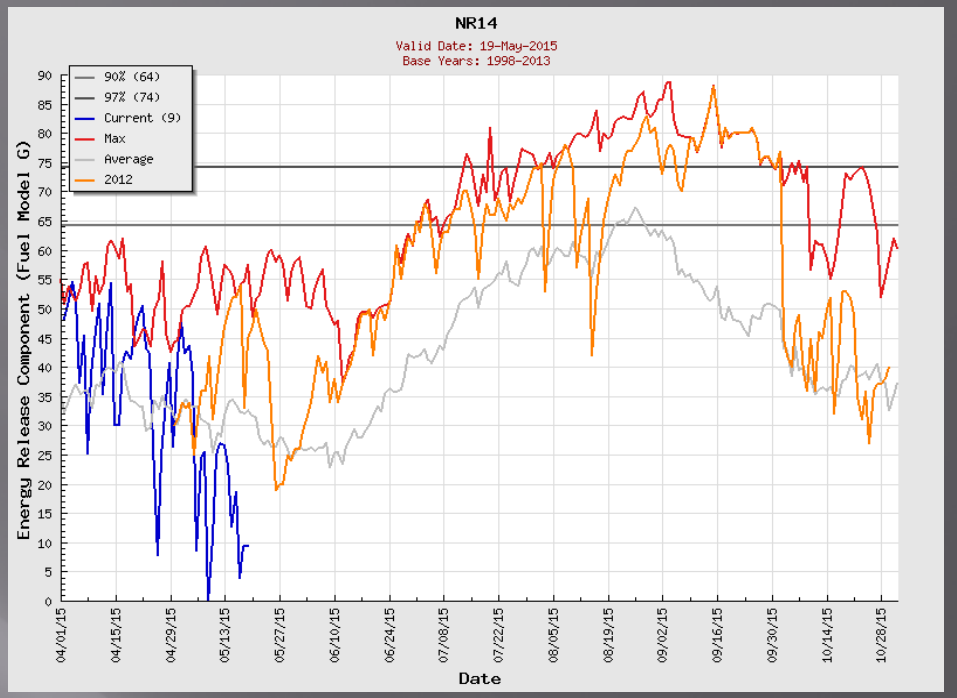


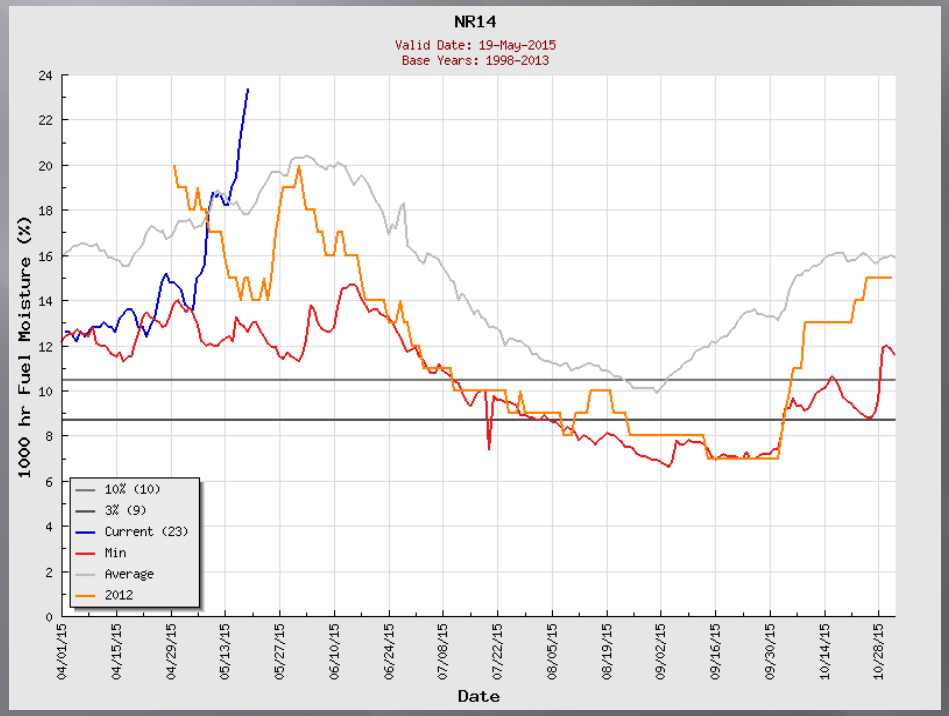
NR14 – Southern Montana (Big Horn/Powder River)

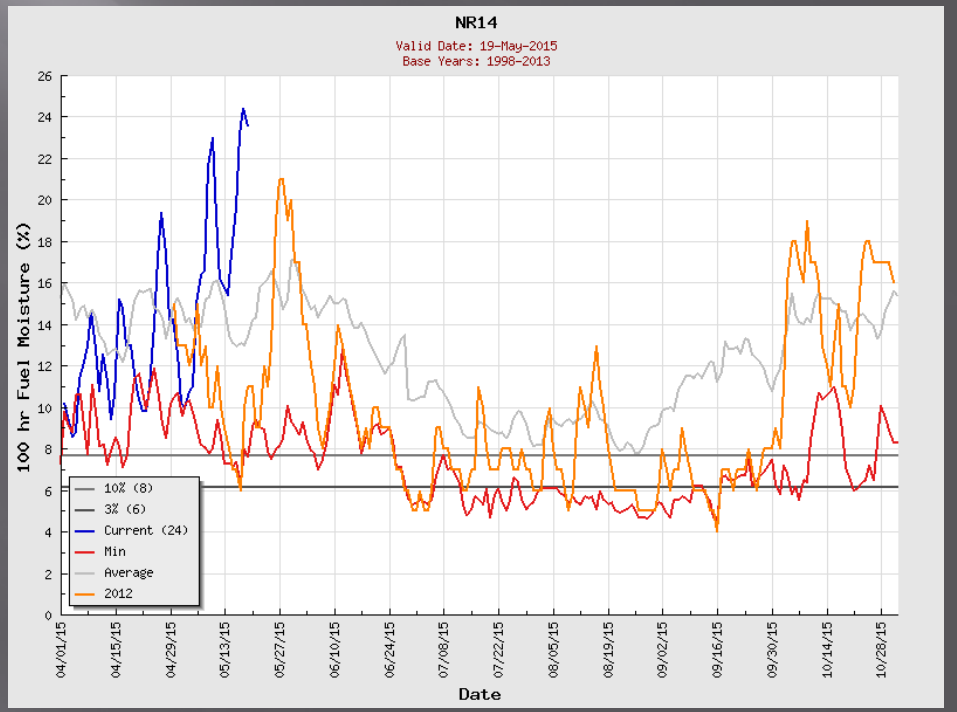


Wolf Mountain
Bighorn Mountain
Fort Howes

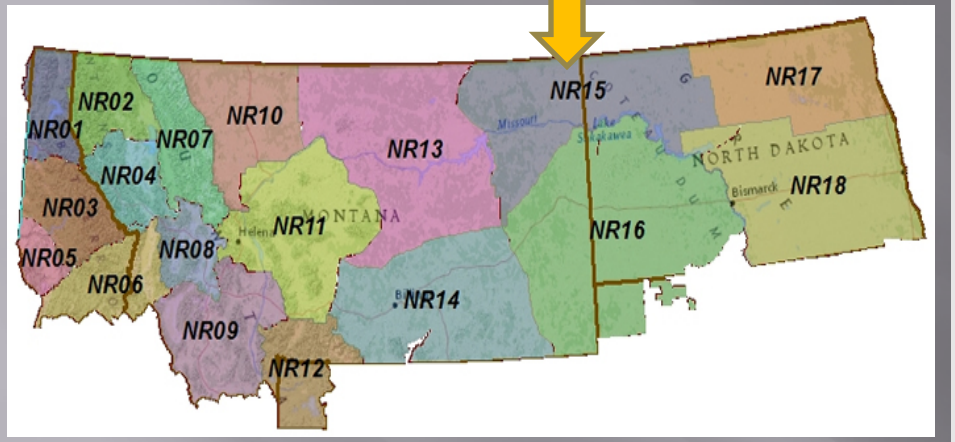
Pryor Mountain
Badger Peak





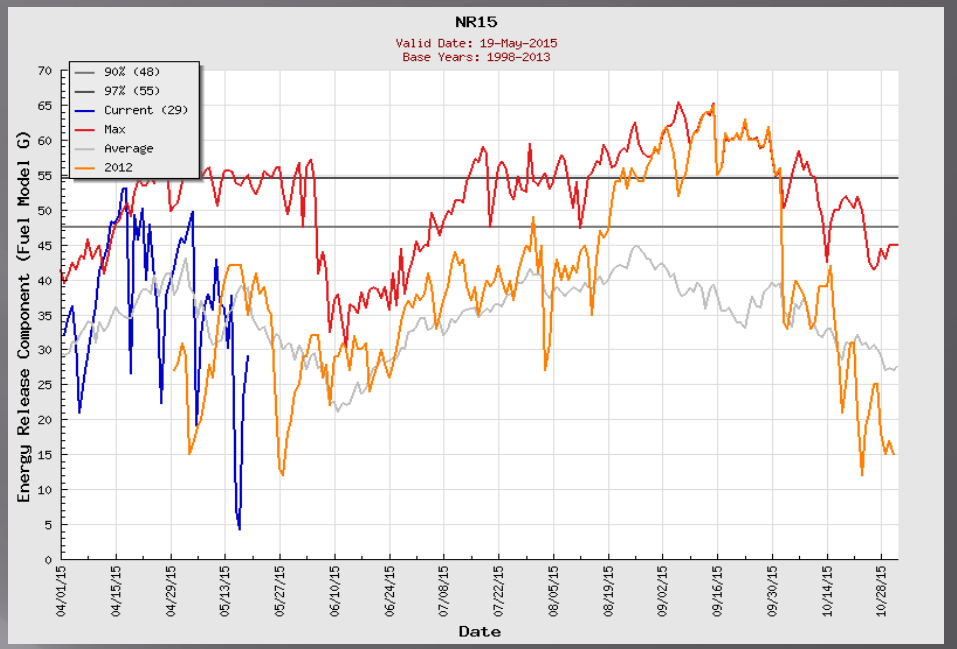


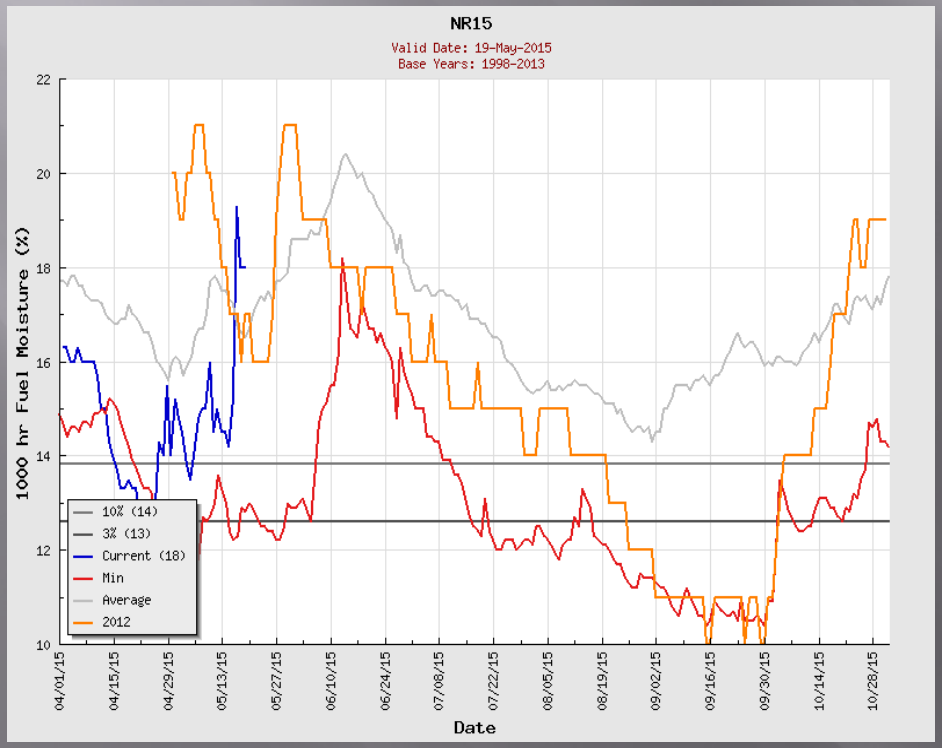
NR15 – Northeast Montana/Northwest North Dakota

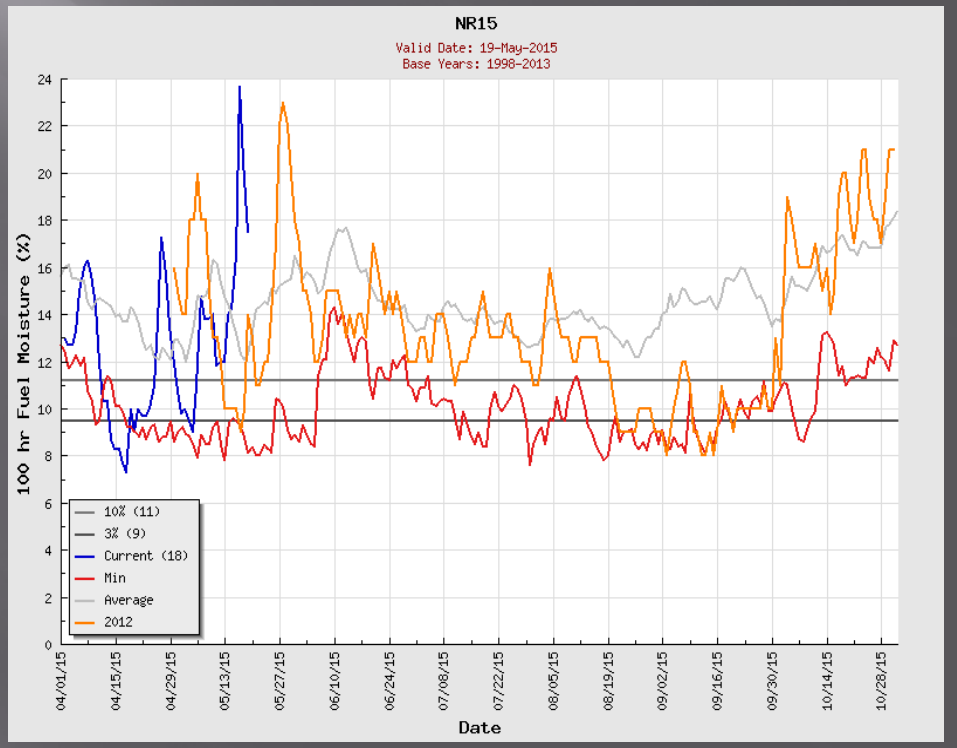


Poplar
Lostwood

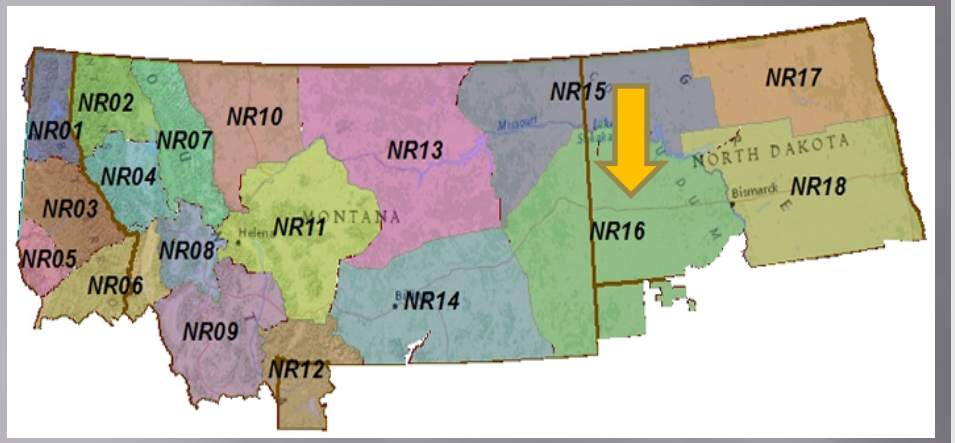
Crosby
Watford City





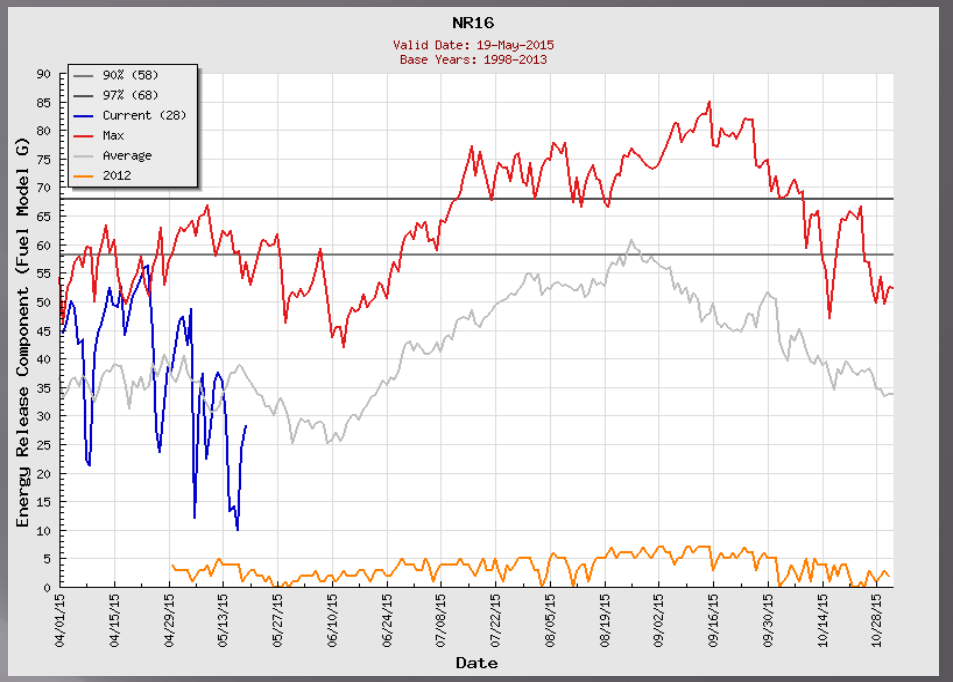


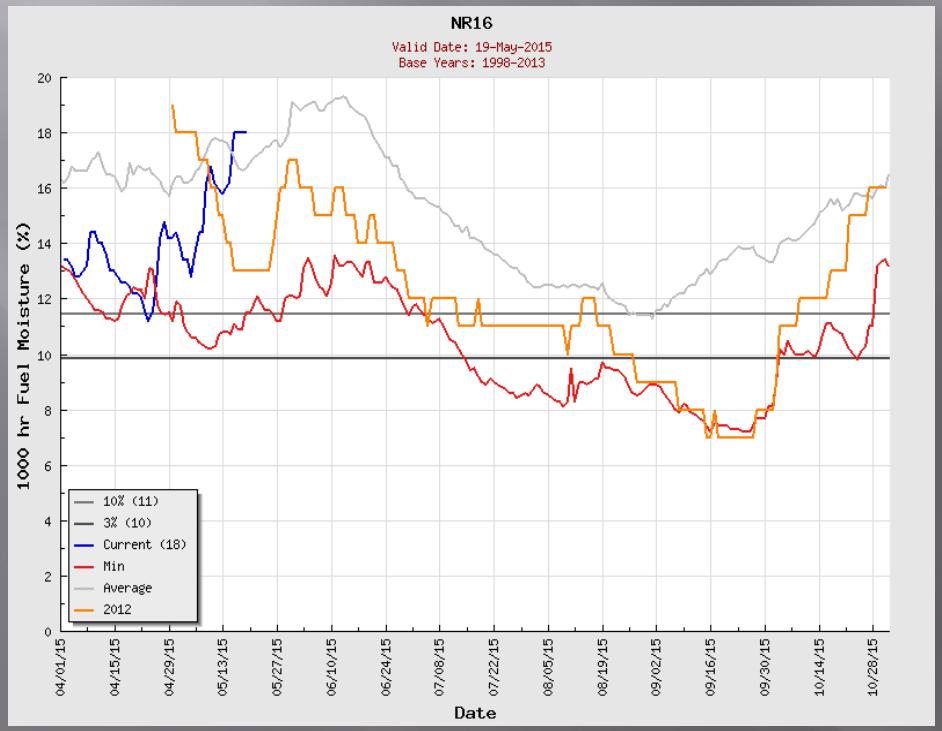
NR16 – Southeastern Montana/Southwestern South Dakota

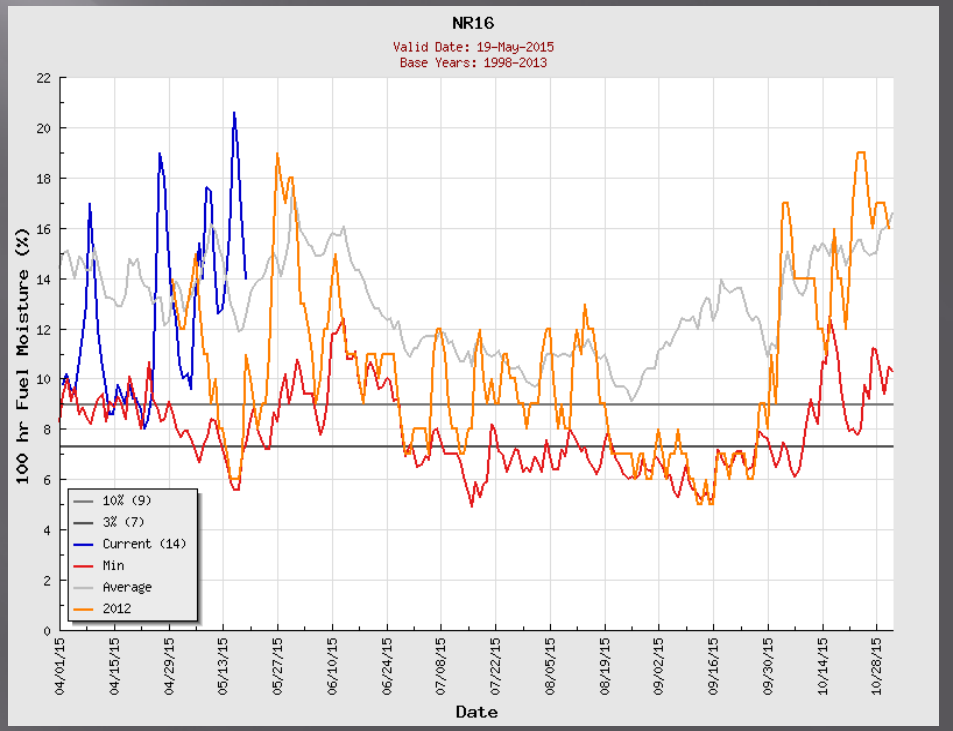


Big Sheep Mountain
Cannonball Creek

Knowlton
Sand Creek







NRCC
Northern Rockies Coordination Center

Mobilizing Incident Resources ...throughout Montana, North Dakota, Northern Idaho, a small portion of Northwestern South Dakota and Yellowstone National Park

Wednesday, May 22, 2013

INCIDENT INFORMATION

PREDICTIVE SERVICES
- Intelligence
- Weather
- Fuels/Fire Danger
- Outlooks

LOGISTICS / DISPATCH
- Dispatch Operations
- Aviation
- Crews
- Equipment/Supplies
- Overhead

ADMINISTRATIVE
- Northern Rockies Coordinating Group
- Policy and Reports
- Incident Business Management
- Safety Management
- Software Applications
- Training

RELATED LINKS
- National
- Area

Welcome to the NORTHERN ROCKIES COORDINATION CENTER

The **Northern Rockies Coordination Center (NRCC)** is the interagency focal point for coordinating the mobilization of resources for wildland fire and other all-hazard incidents throughout the Northern Rockies Area and, when necessary, for assignment throughout the United States. Located in Missoula, Montana, the Center also provides Intelligence and Predictive Services related products for use by the wildland fire community for purposes of wildland fire and incident management decision-making.

There are five primary components to the NRCC website.

- Incident Information provides general information on large wildland fires, fire restrictions and closures, and other relevant activity throughout the Geographic Area.
- Predictive Services provides operational products and links to incident situation information, maps, resources, current fire weather conditions, forecasts, fuels, fire behavior as well as daily, weekly and monthly fire weather/fire danger outlooks.
- Logistics/Dispatch provides detailed operation and information links for aviation, crews, equipment and overhead, including Incident Management Teams.
- Administrative provides fire and incident management tools and links including policies and reports, business management, safety, software applications, and training.
- Related Links component provides links to related Internet websites within the Northern Rockies Area and nationally.

BULLETIN BOARD

SITUATION

PREPAREDNESS LEVELS
Northern Rockies PL: 1
National PL: 1

Situation Reports

Year-to-Date & Historical Wildfire Data

••• Restrictions & Closures •••

SAFETY ALERTS

NRGA Landscape Mortality Safety Alert
NRGA Landscape Mortality Pocket Card

Coal Seam Fires Safety

COOPERATING FEDERAL, STATE AND OTHER AGENCIES IN THE NORTHERN ROCKIES AREA

Montana Drought and Water Supply

Status change from April to May 2015 – Assessed 5/6/2015

(All changes one category unless otherwise noted)

Drier

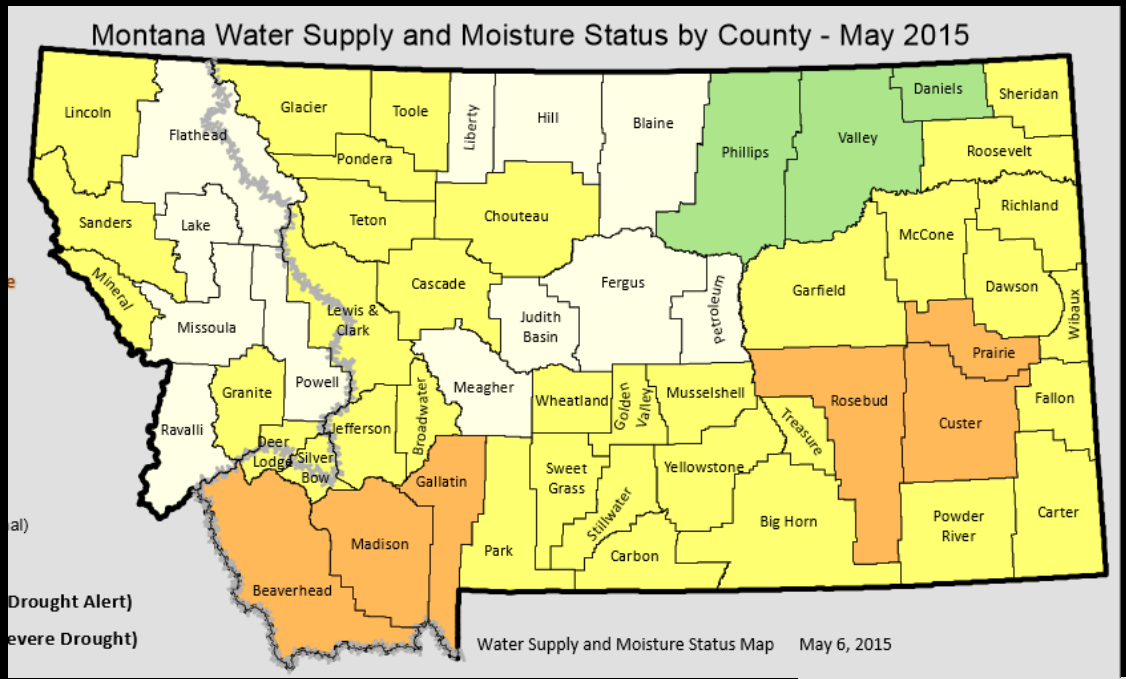
Lincoln	Teton	Garfield
Sanders	Chouteau	McCone
Mineral	Lewis and Clark	Richland
Granite	Cascade	Dawson
Deer Lodge	Judith Basin	Prairie
Glacier	Meagher	Wibaux
Toole	Jefferson	Rosebud
Liberty	Broadwater	Custer
Hill	Gallatin	Powder River
Blaine	Sheridan	Carter
Pondera	Roosevelt	

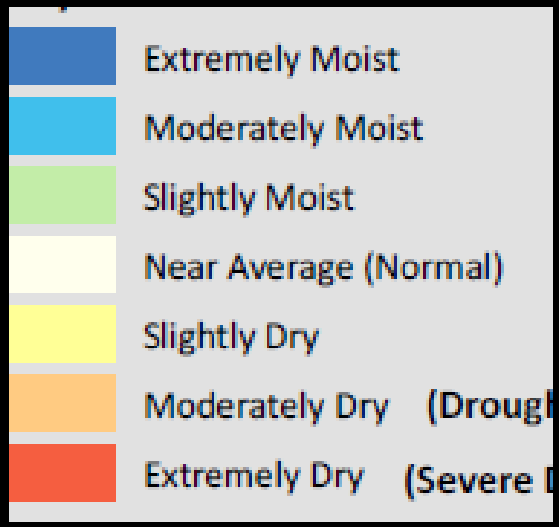
No Change

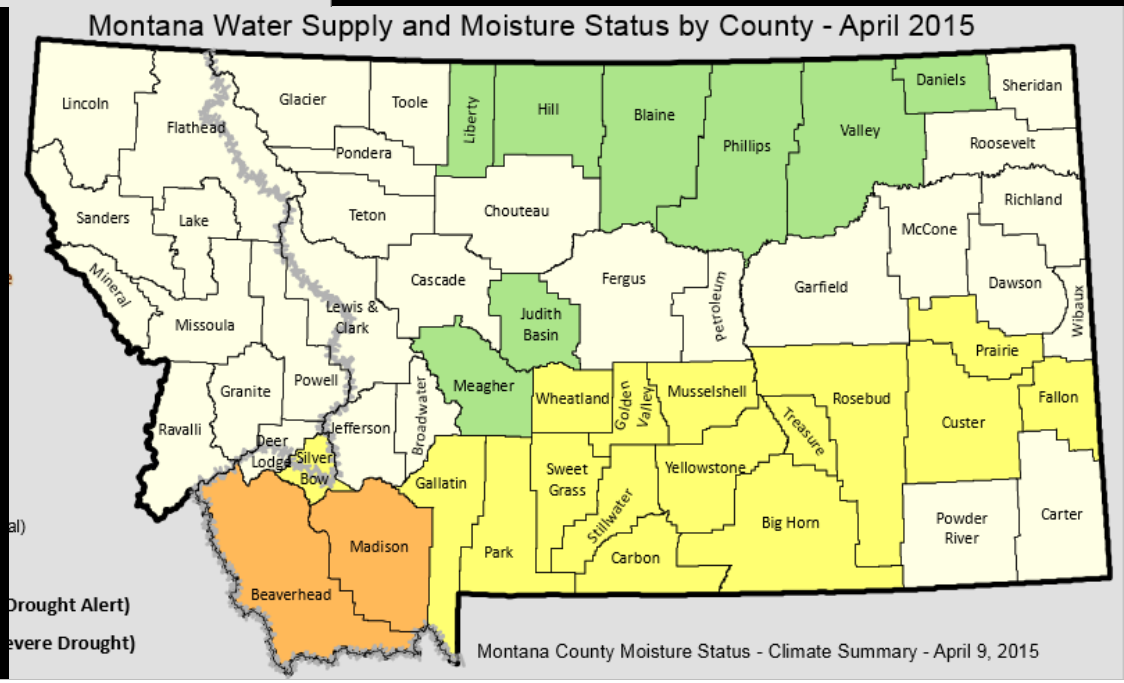
Flathead	Petroleum
Lake	Wheatland
Missoula	Golden Valley
Powell	Musselshell
Ravalli	Park
Silver Bow	Sweet Grass
Beaverhead	Stillwater
Madison	Carbon
Phillips	Yellowstone
Valley	Treasure
Daniels	Big Horn
Fergus	Fallon

Montana Drought Status

May 2015 vs. April 2015







Montana Drought & Water Supply Advisory Committee

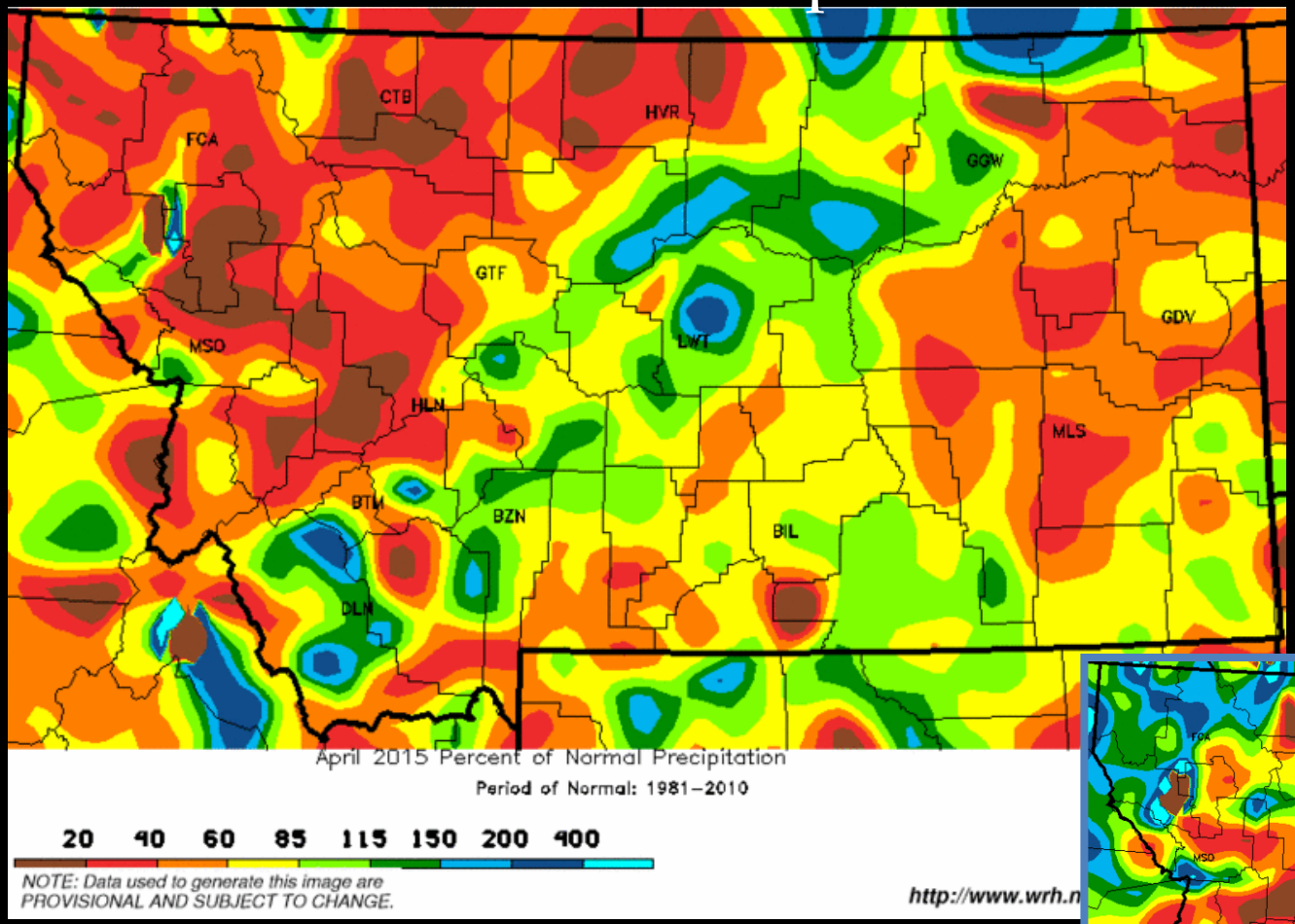
May 21, 2015

National Weather Service

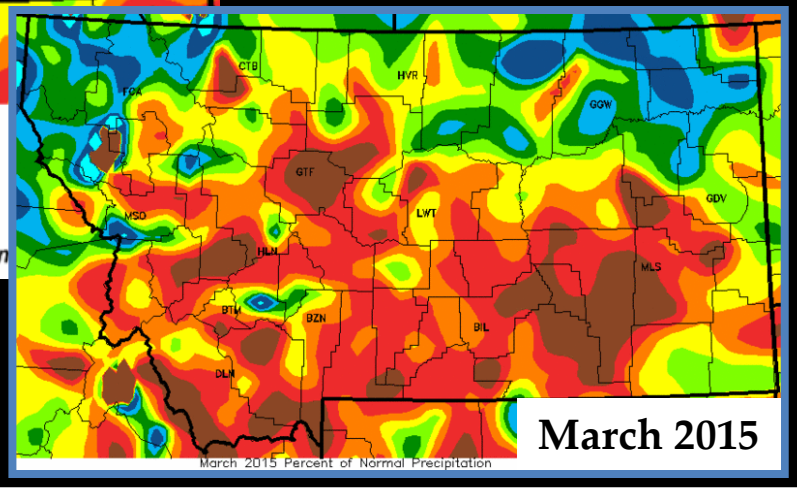
Gina Loss – Service Hydrologist

Percent of Normal Precipitation

April 2015

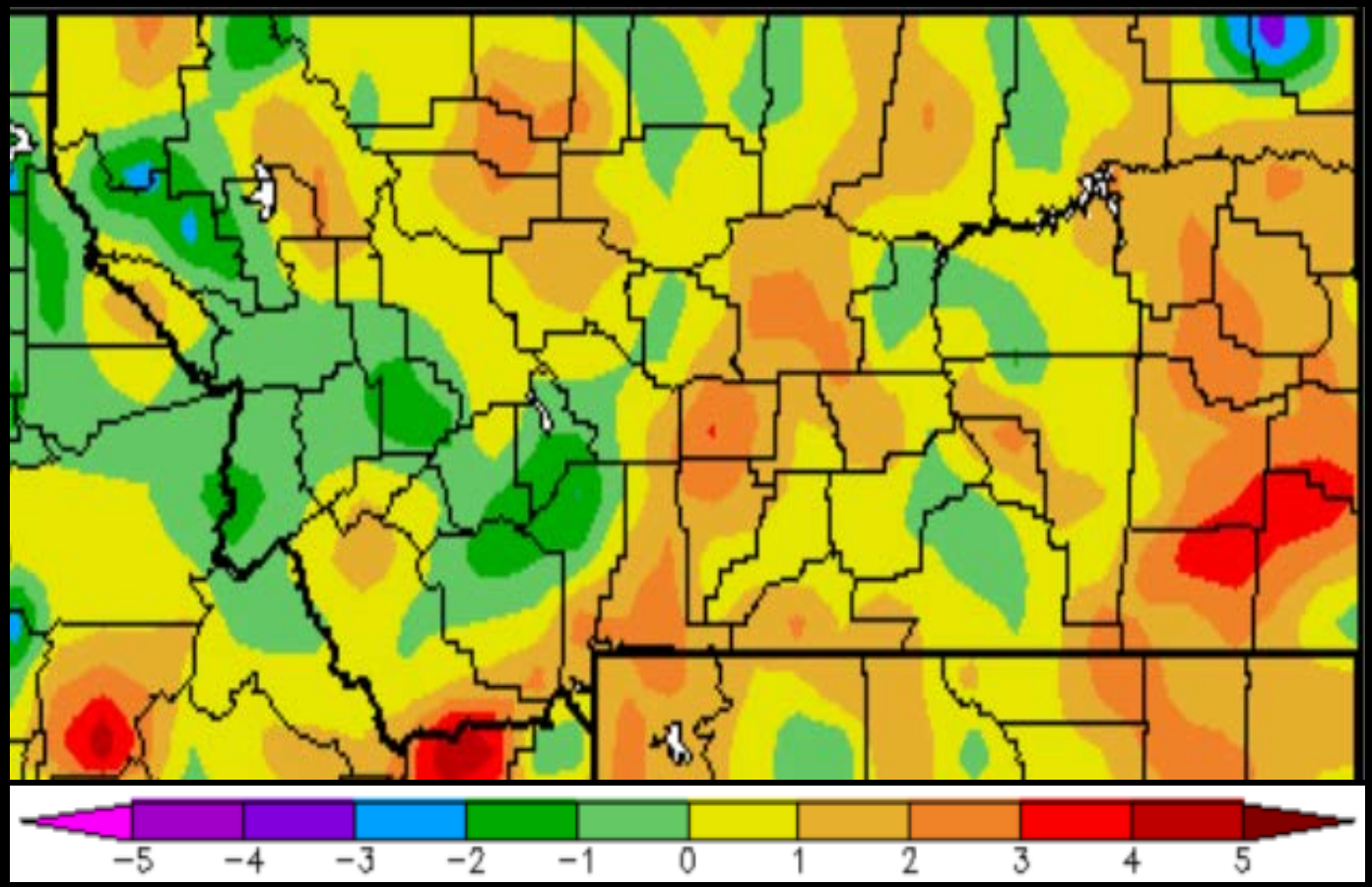


- Much of Montana below to well below average
  - West, north-central, east
- Smaller areas above to well above average
  - Southwest, central



March 2015

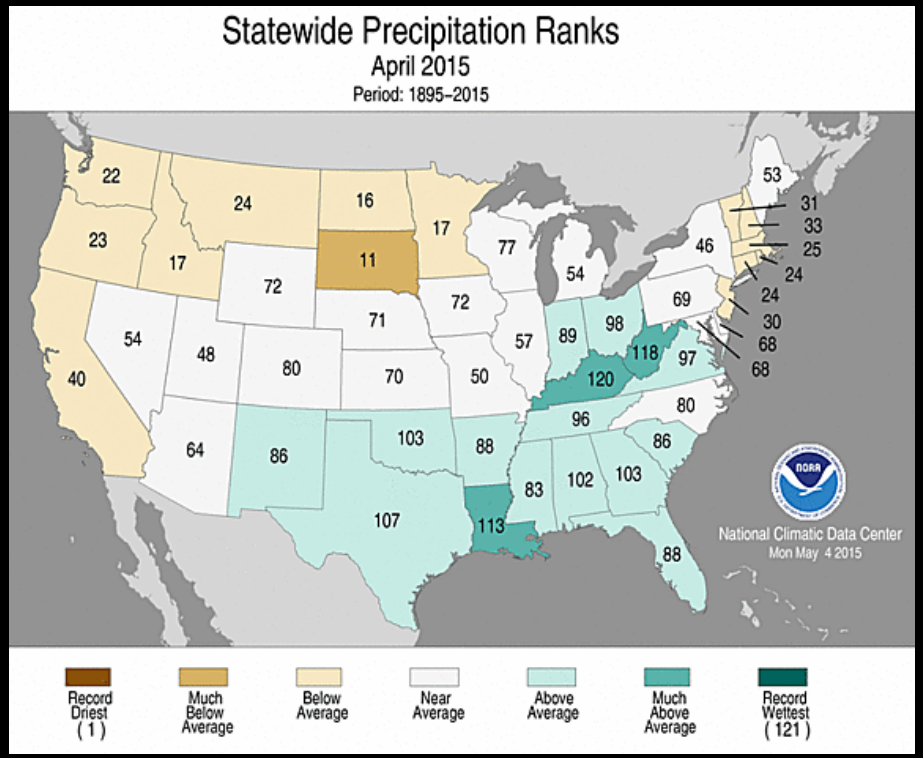
Departure from Average Temperature
April 2015

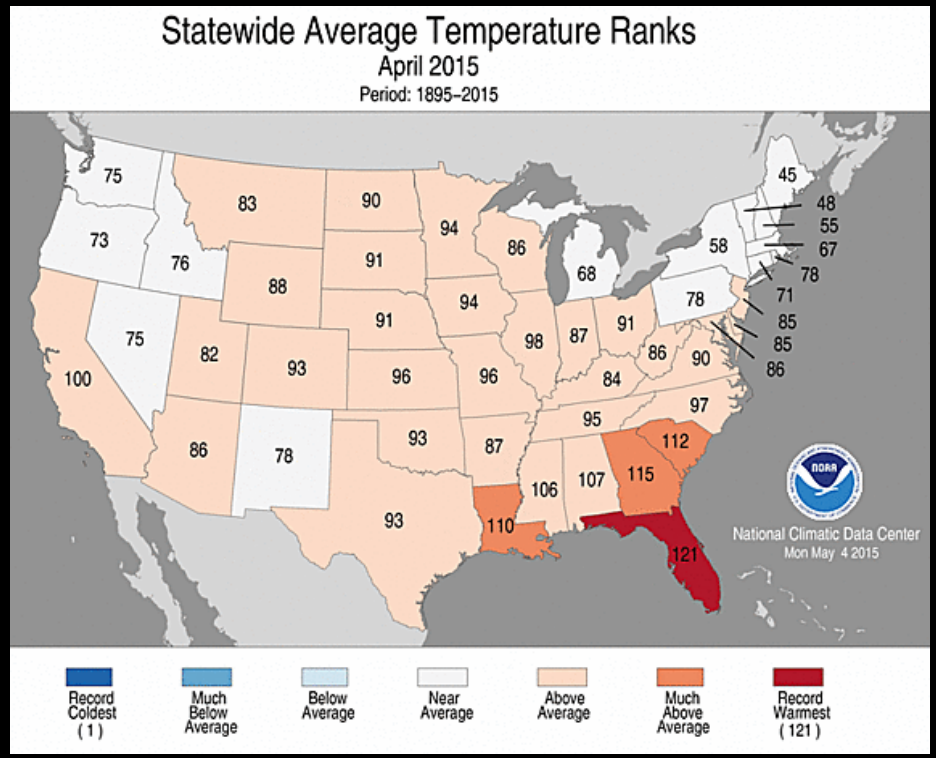


- Mostly near average statewide
- Small areas southwest and southeast 3 to 4°F above average

April Rankings

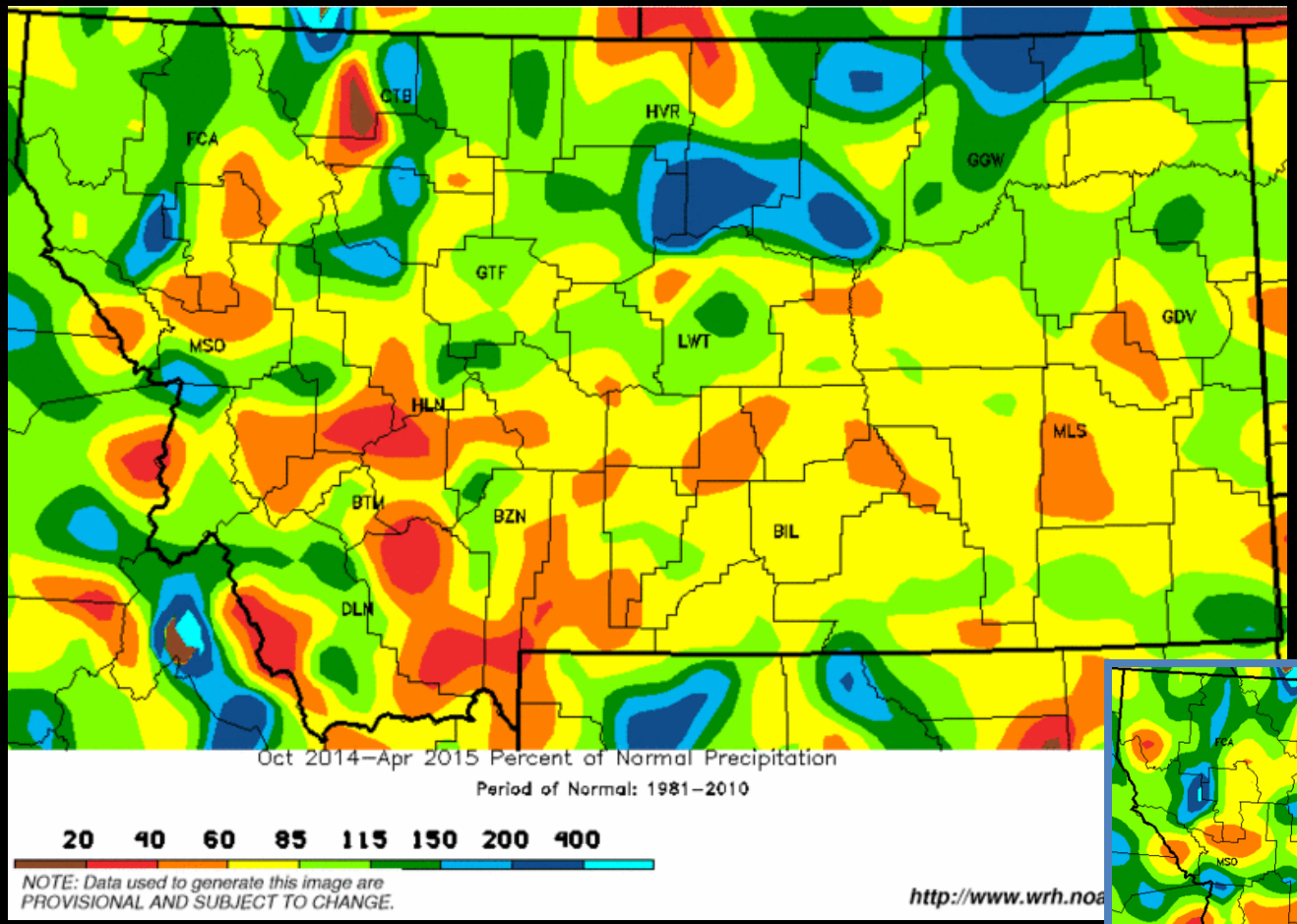
24th driest, 39th warmest



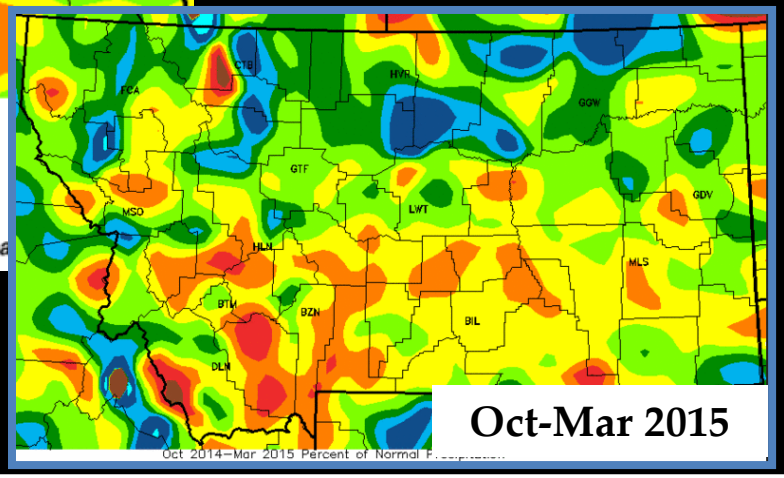


Percent of Normal Precipitation

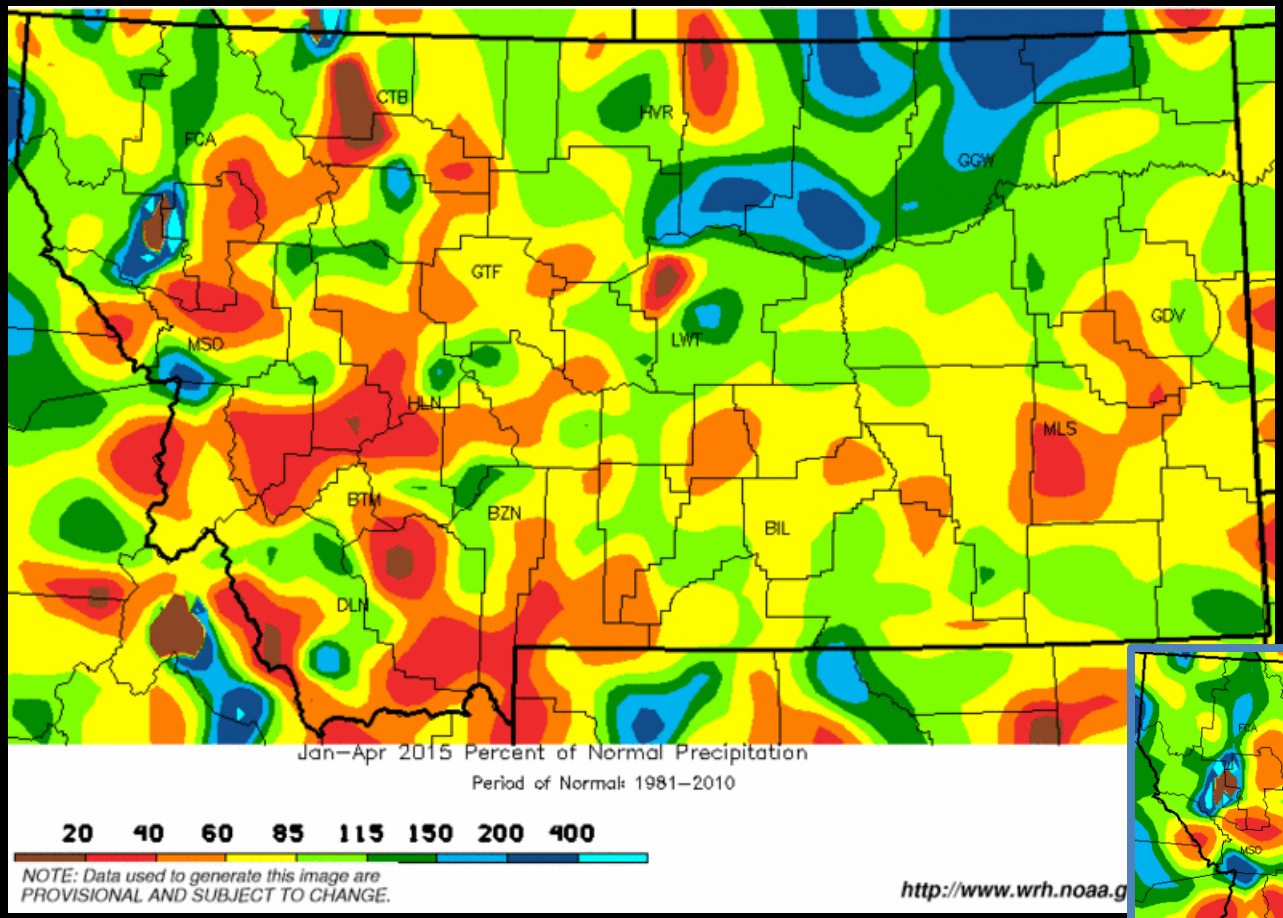
Water Year 2015



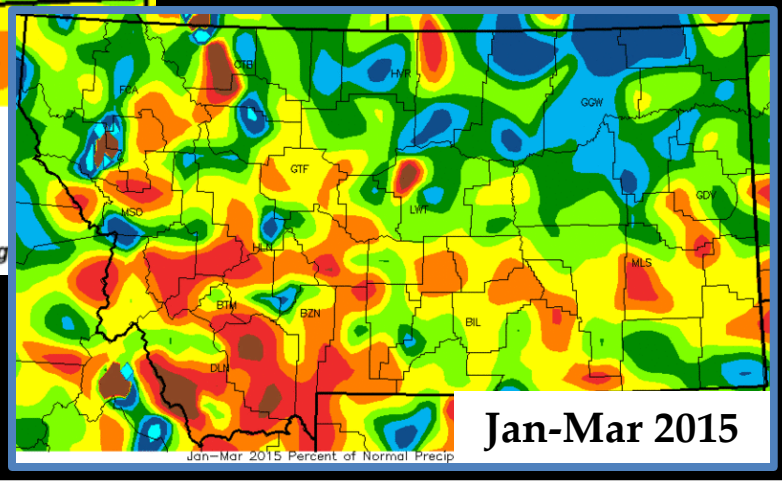
- October - April
- Northern half mostly near to above average
- Southern half mostly below to well below average



Percent of Normal Precipitation
Calendar Year



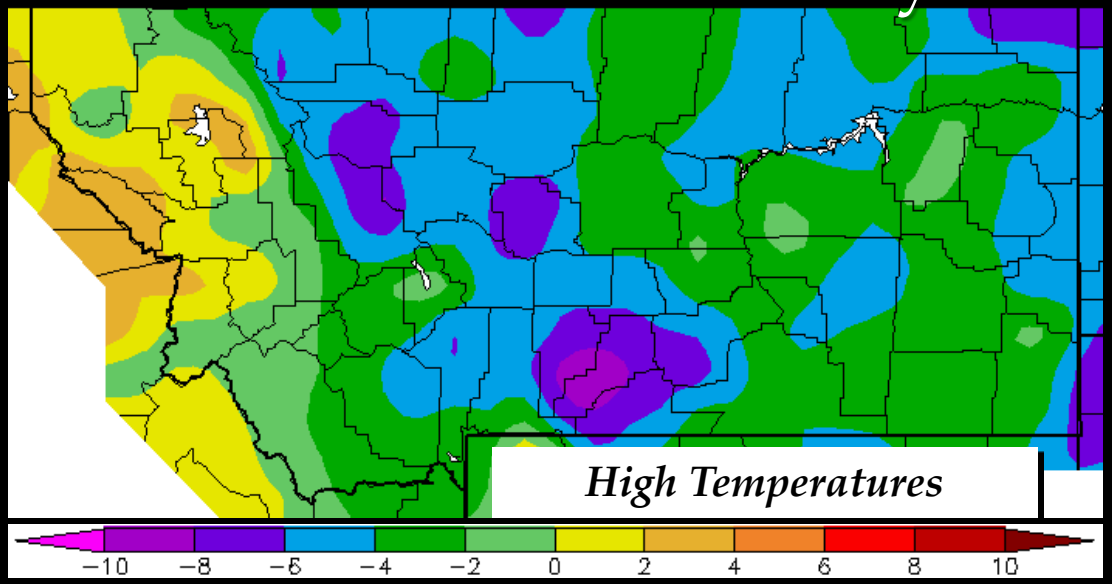
- January - April
- West and southwest has large areas well below average
- South-central and southeast below to well below average
- North-central and northeast above to well above average

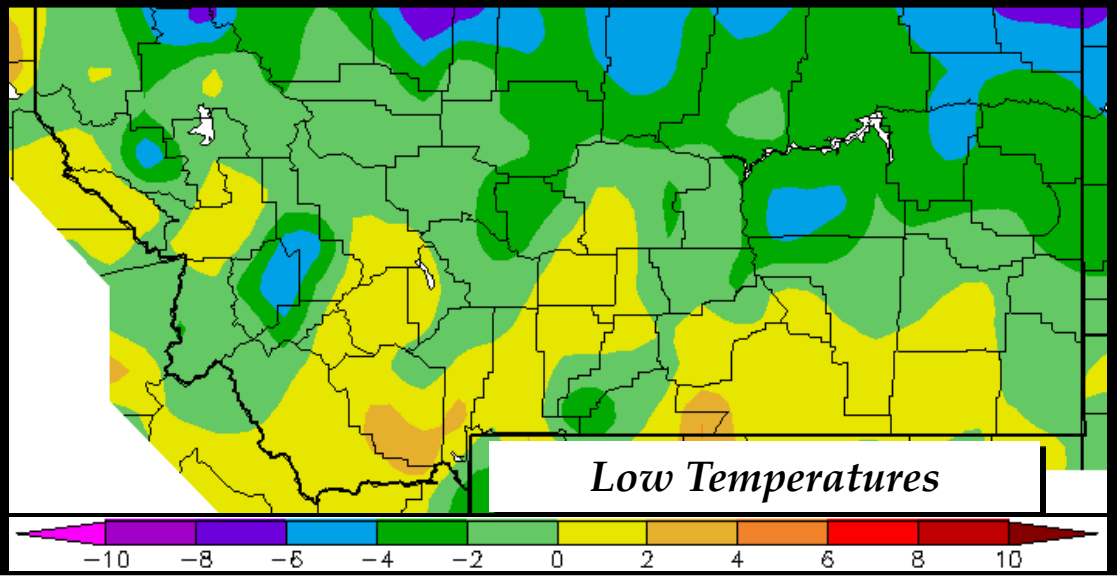


Jan-Mar 2015

Temperature Anomalies

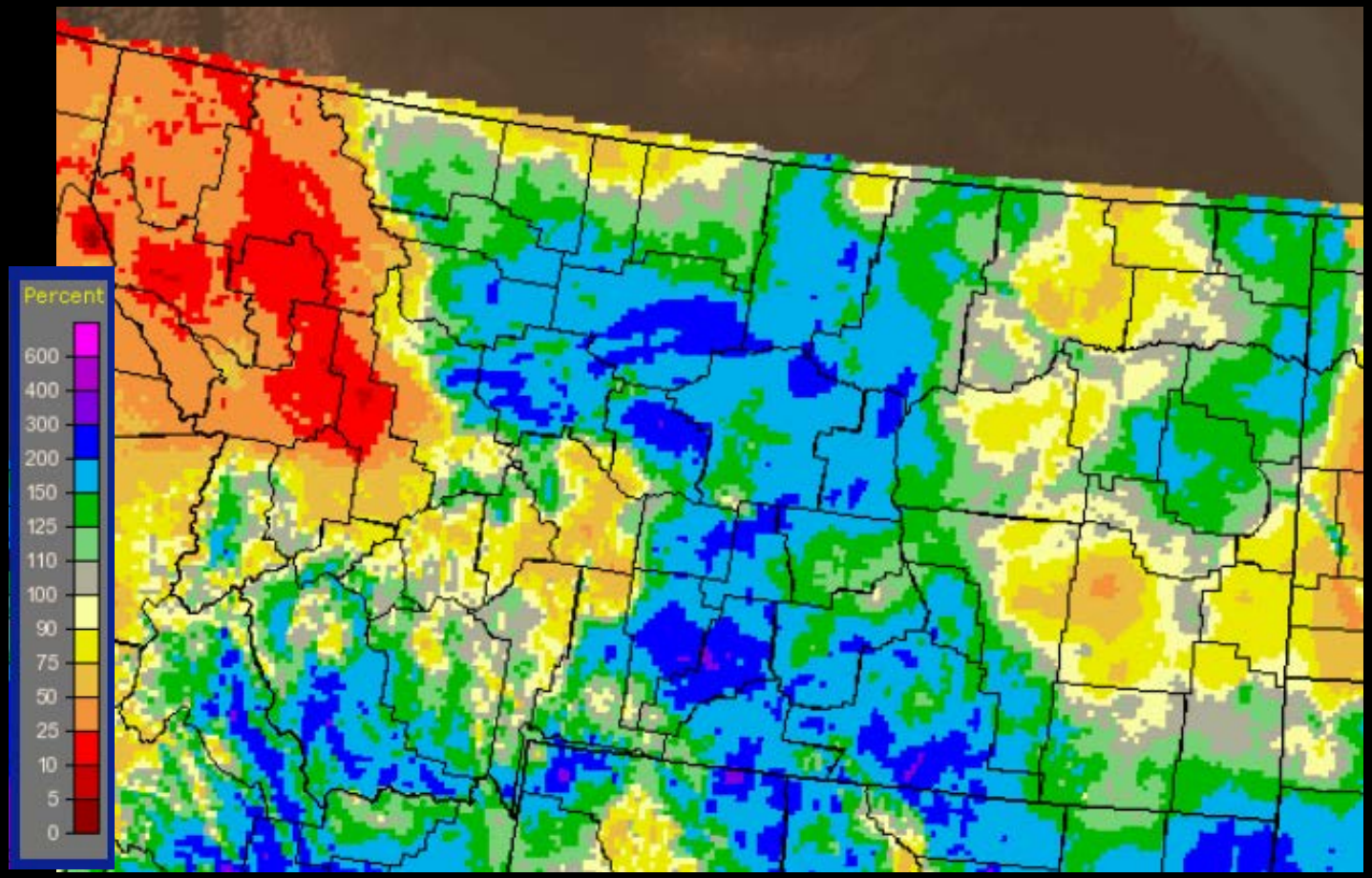
May 1 - 19





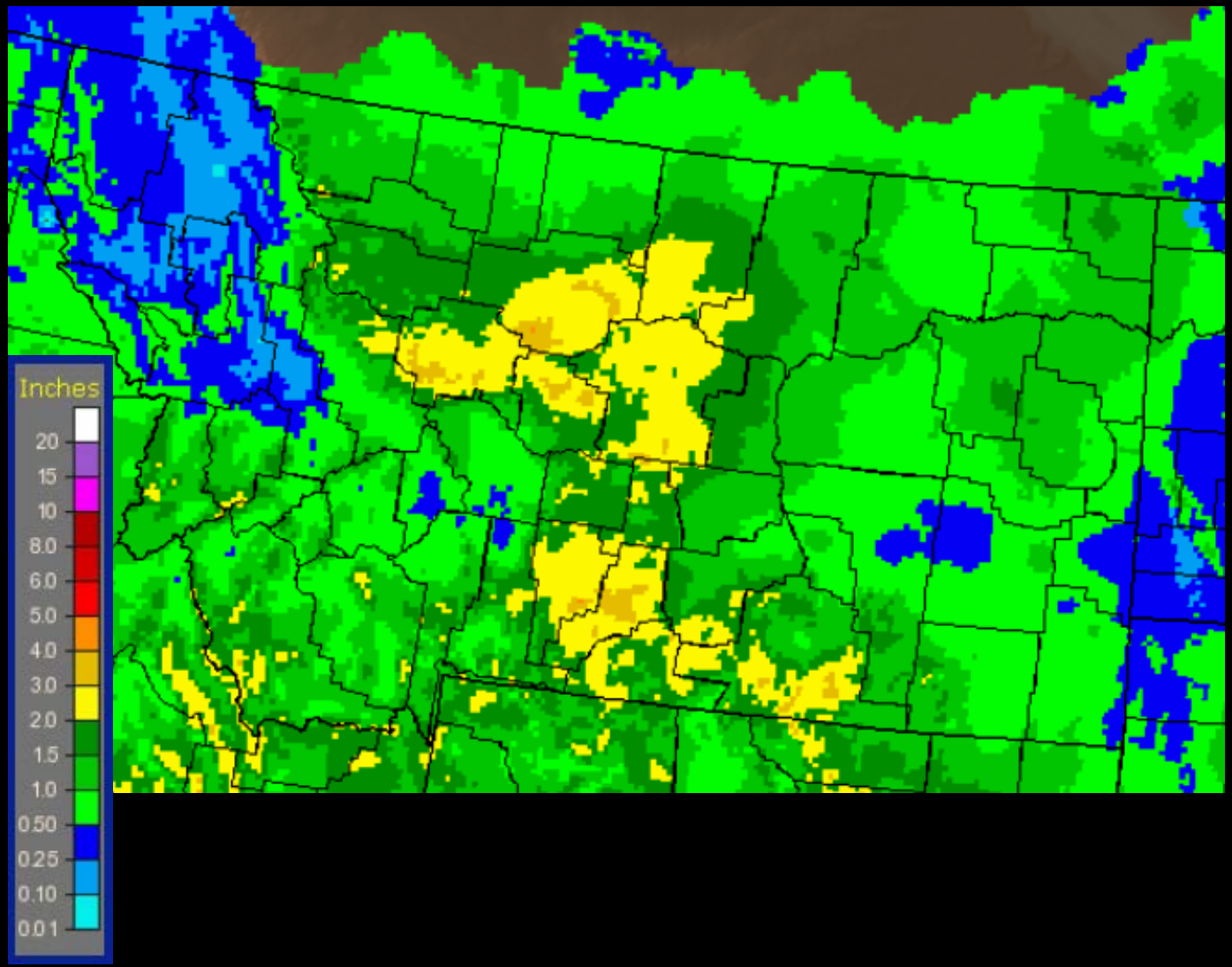
- Highs
  - Near average west
  - Central and east 4-8 °F below average
- Lows
  - Mostly near average
  - Hi-line 4-6 °F below average

Percent of Average Precipitation
May 1 - 19



- Well below average west
- Above average southwest, south-central, central, north-central, and northeast
- Below average southeast

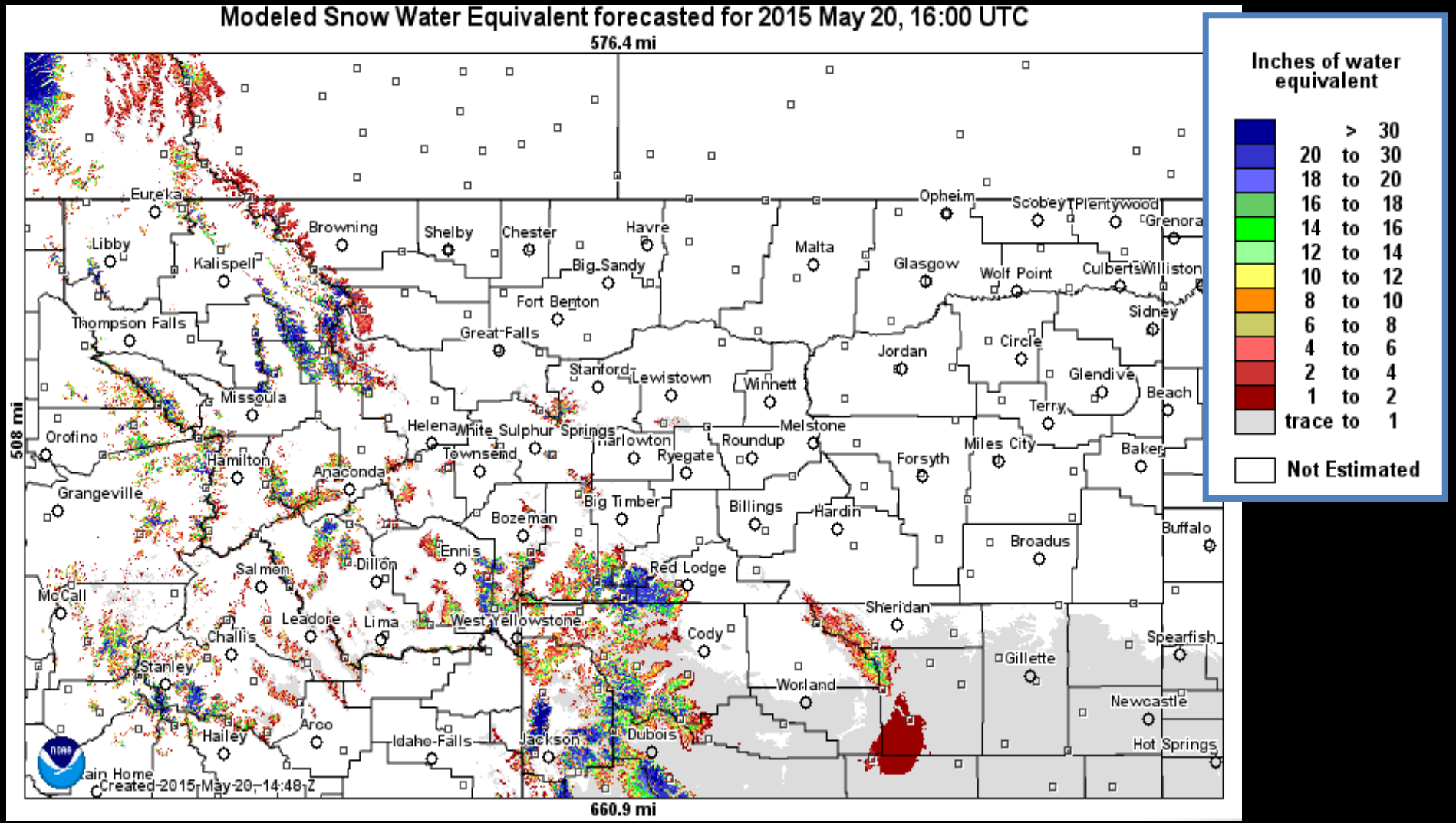
Total Precipitation
May 13 - 19



- Mostly result of event May15-17
- Most of Montana east of the Divide got at least one inch
- Large areas of 2-3 inches in favored upslope area
- Isolated areas of 3-4 inches
- Few reports of more than 4 inches.

NOHRSC Modeled Snow Water Equivalent

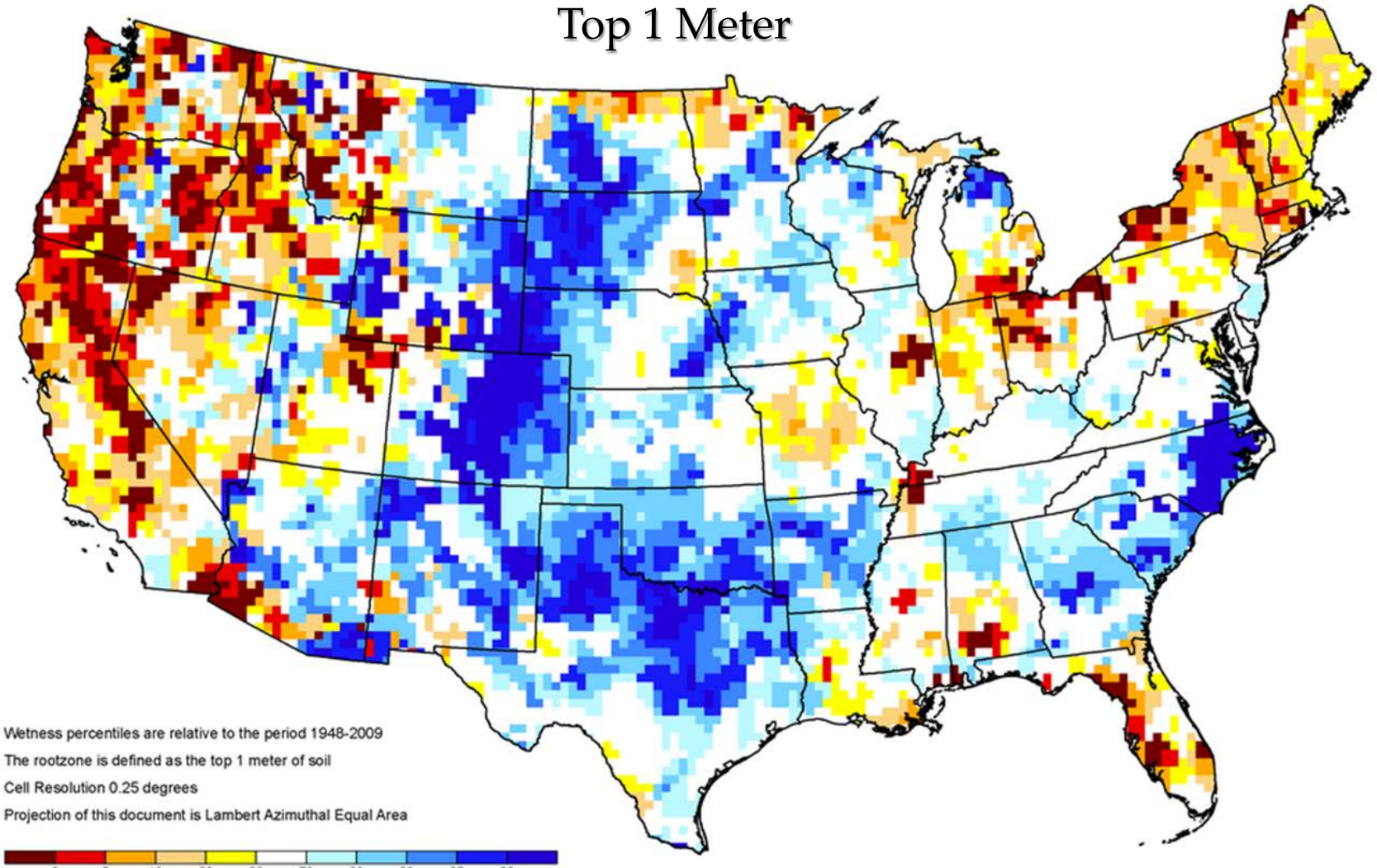
May 20, 2014



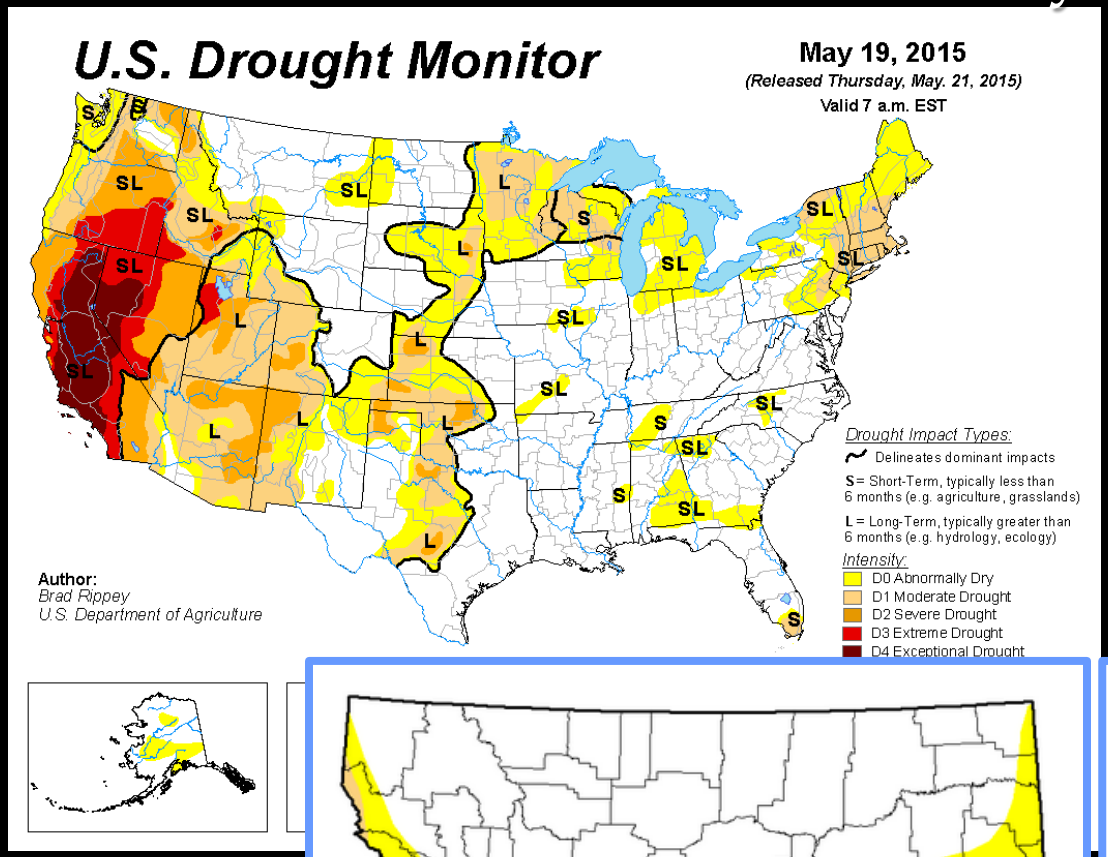
GRACE-Based Root Zone Soil Moisture Drought Indicator

May 11, 2015

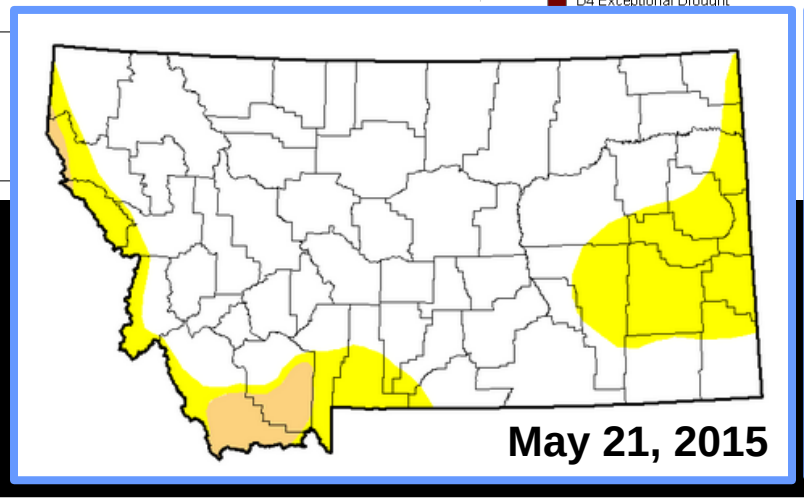
Top 1 Meter

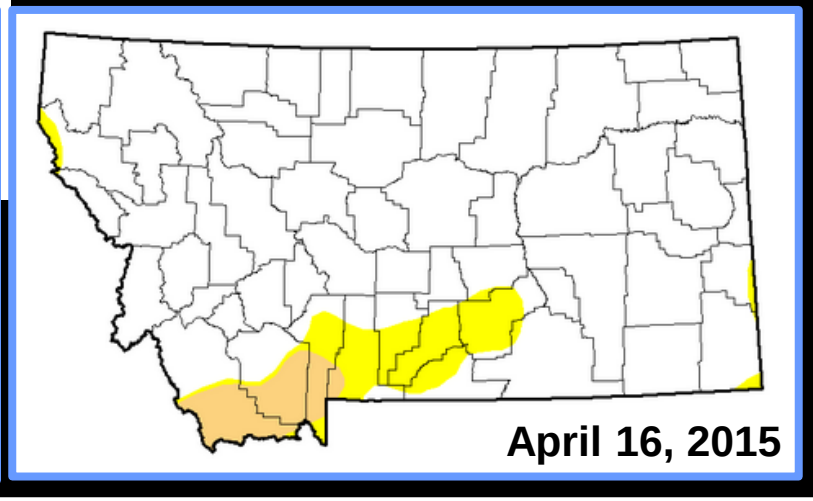


National Drought Monitor
Issued May 21



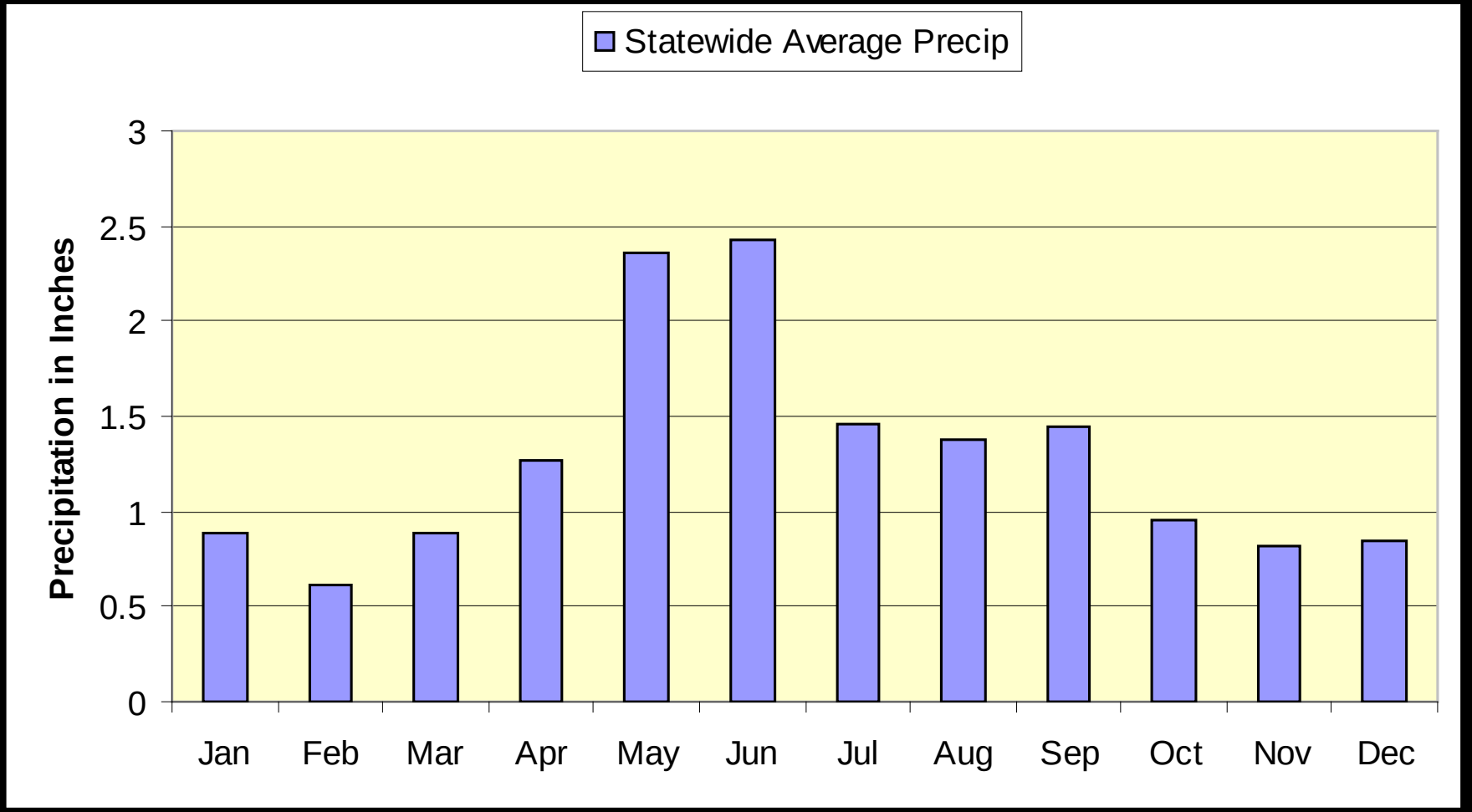
- D0 'Abnormally Dry' east-central Montana and along MT/ID border
- D0 'Abnormally Dry' to D1 'Moderate Drought' over southwest Montana





Statewide Average Precipitation

May first of two wettest months of year

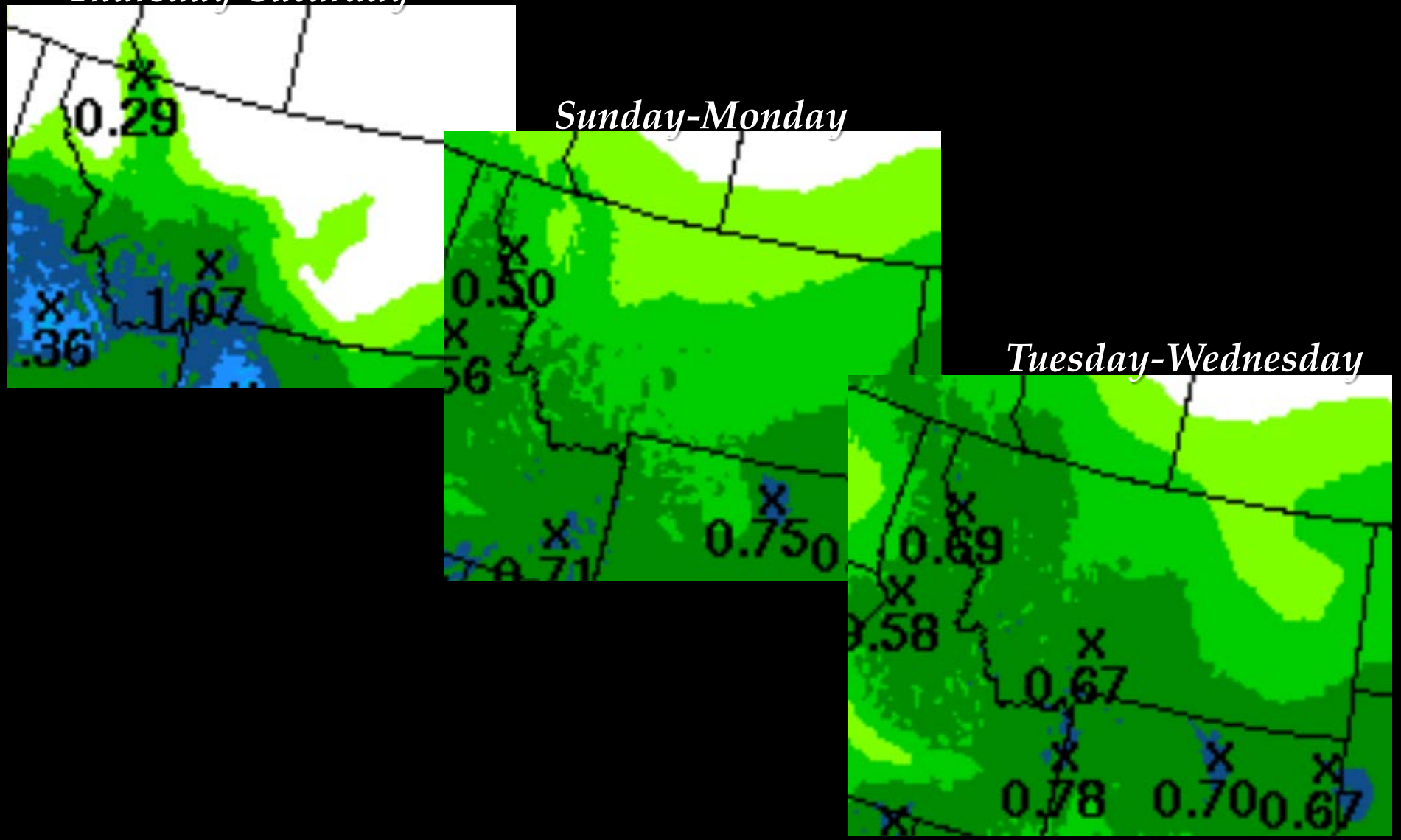


7-Day Precipitation Forecast

Thursday-Saturday

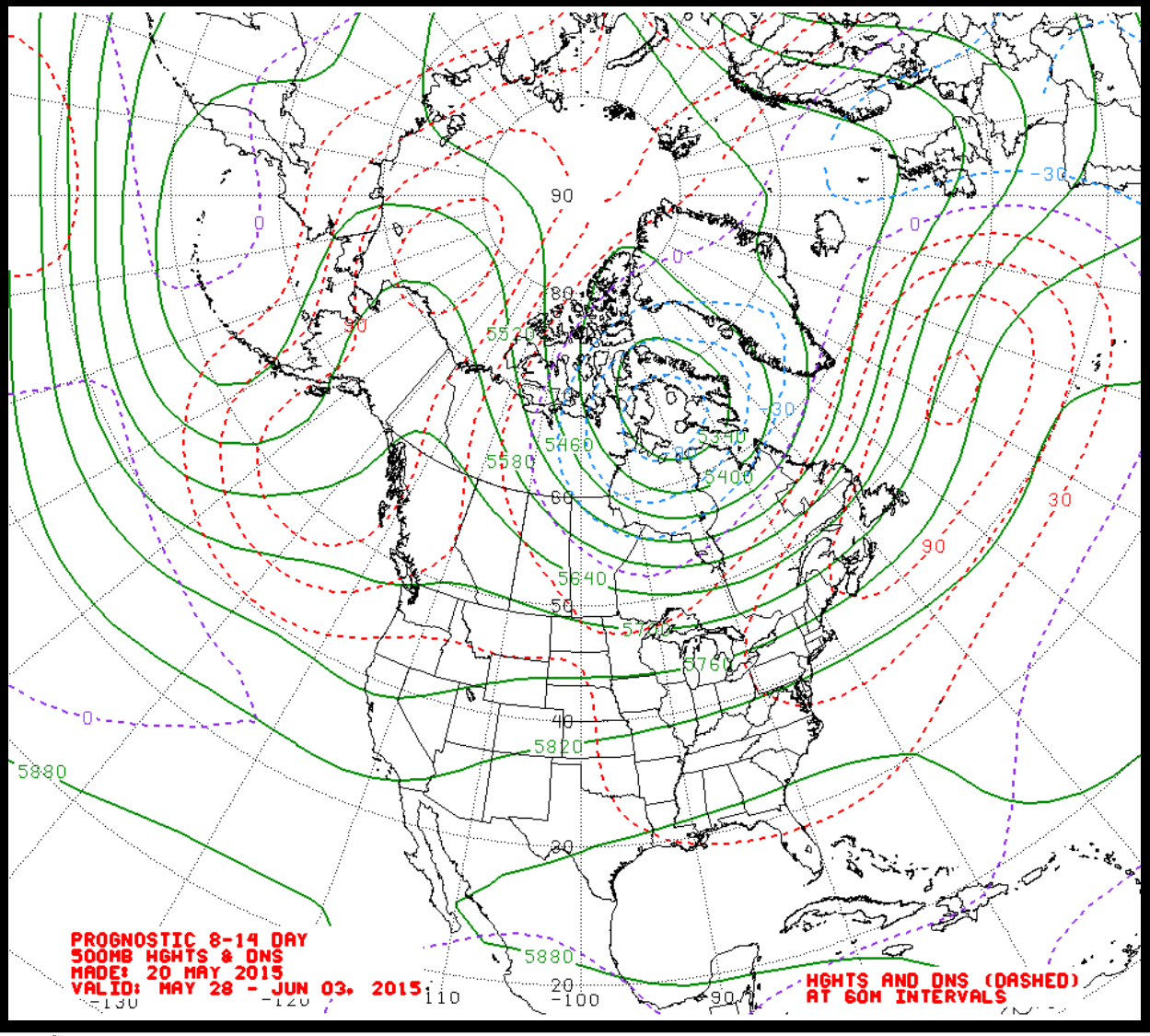
Sunday-Monday

Tuesday-Wednesday



8 to 14 Day Outlook

500mb Heights and Anomalies

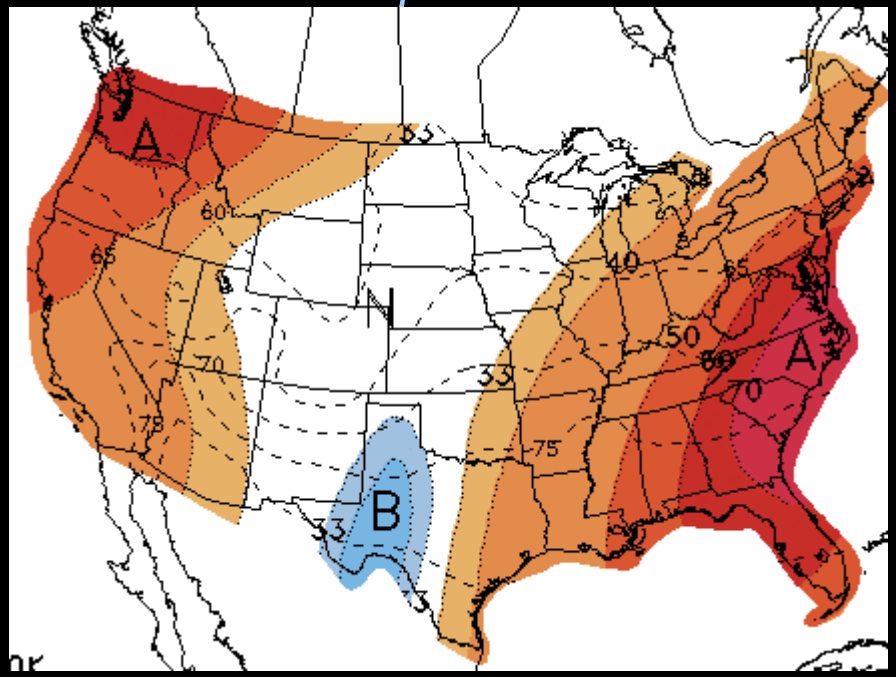


- May 28 – June 3
- Split in flow coming into Pacific Northwest and Montana

8 to 14 Day Outlook

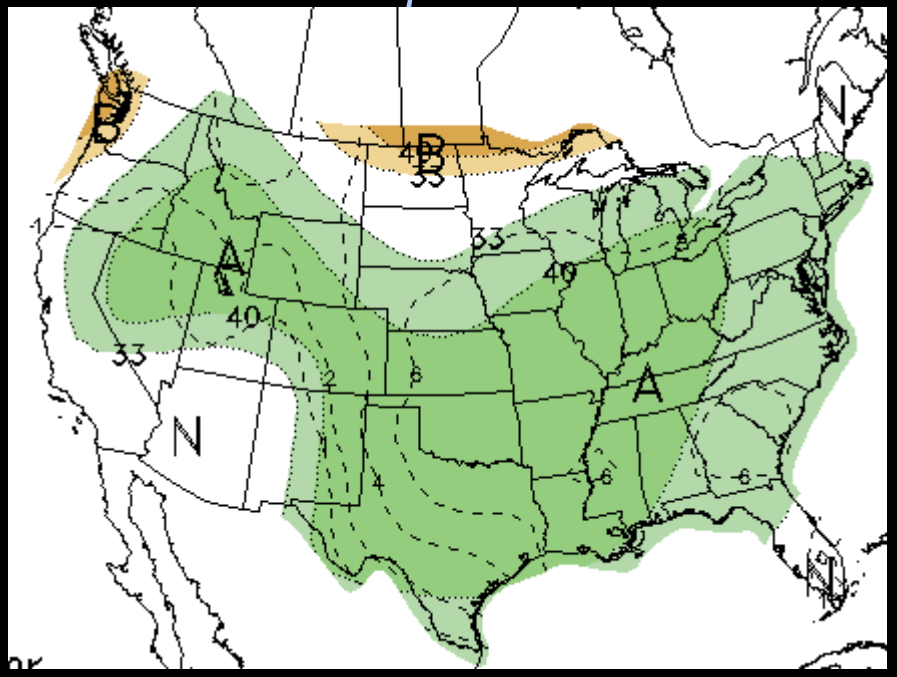
May 28 – June 3

Temperature



- 33% to 60% chance temperatures will average above normal west across all but southeast Montana

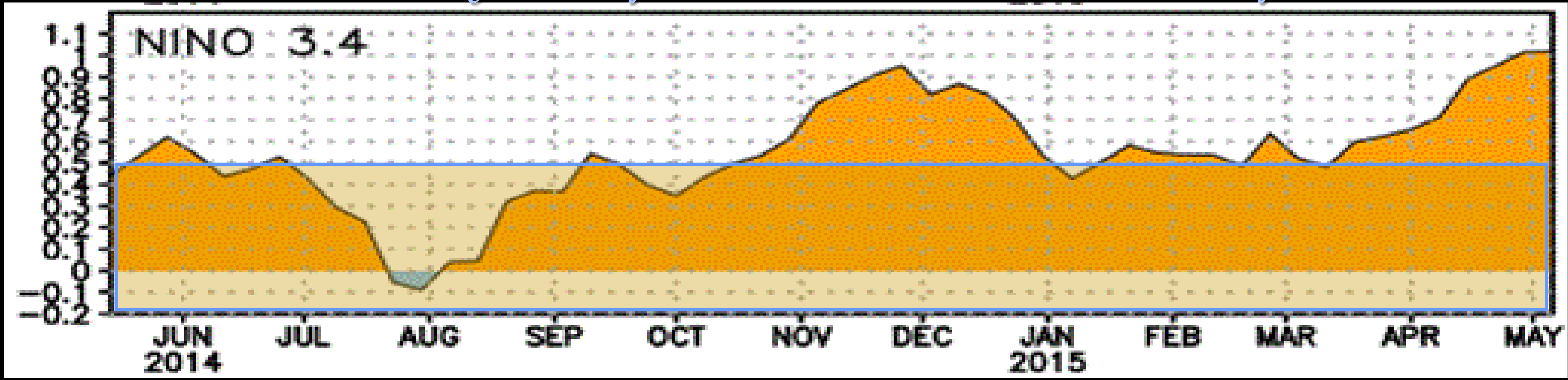
Precipitation

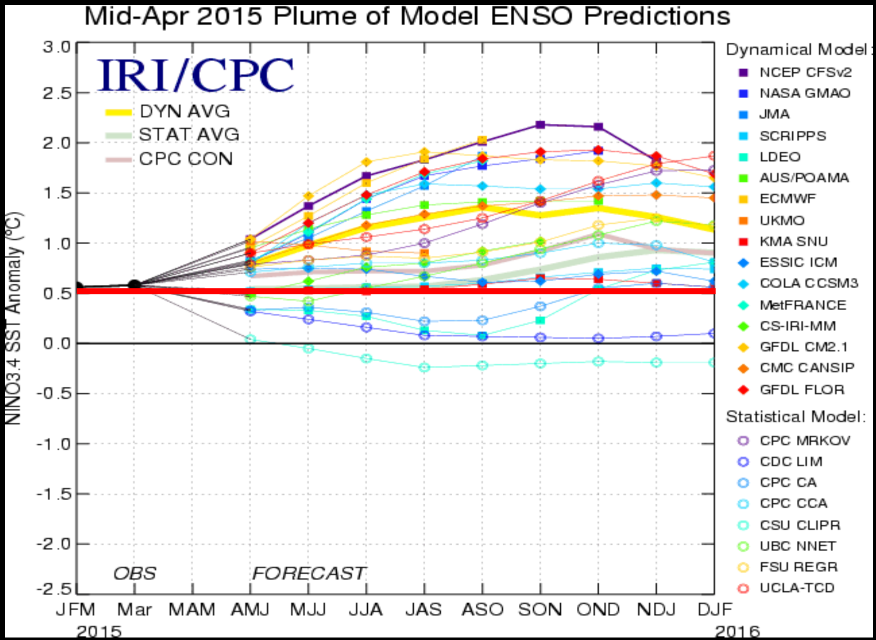


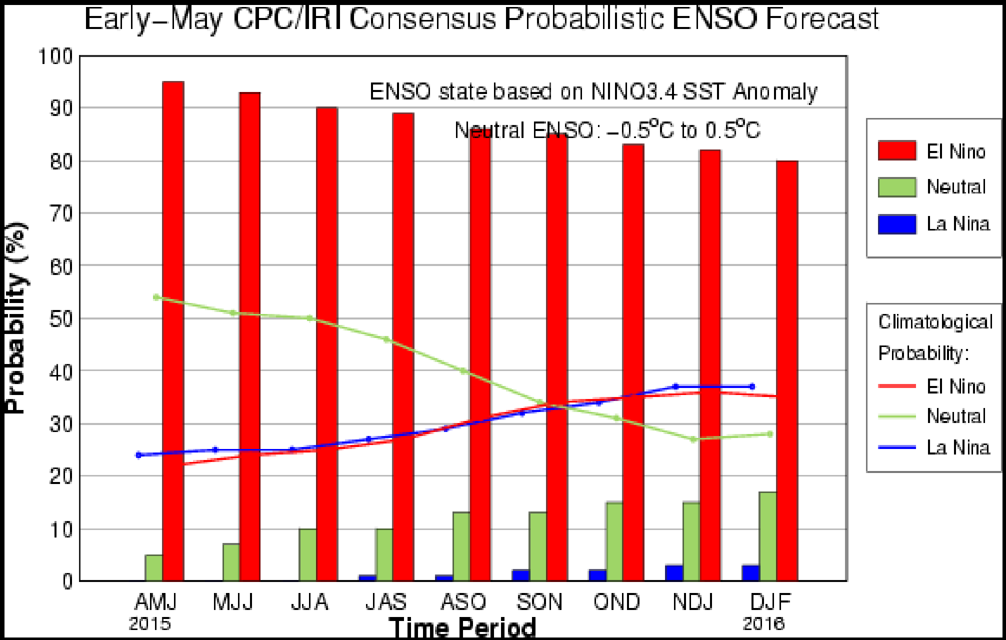
- 33 to 50% chance precipitation will average above normal west, central and south
- 33 to 40% chance precipitation will average below normal far northeast

El Niño / La Niña

El Niño Advisory - Likely El Niño will continue into early winter





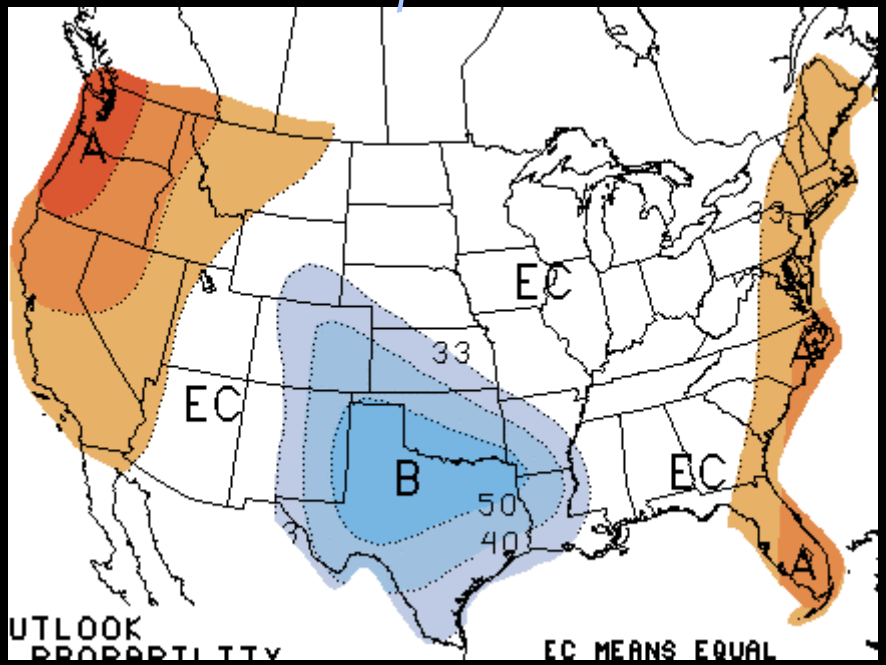


NOAA - National Weather Service – Building a Weather Ready Nation

June Outlook

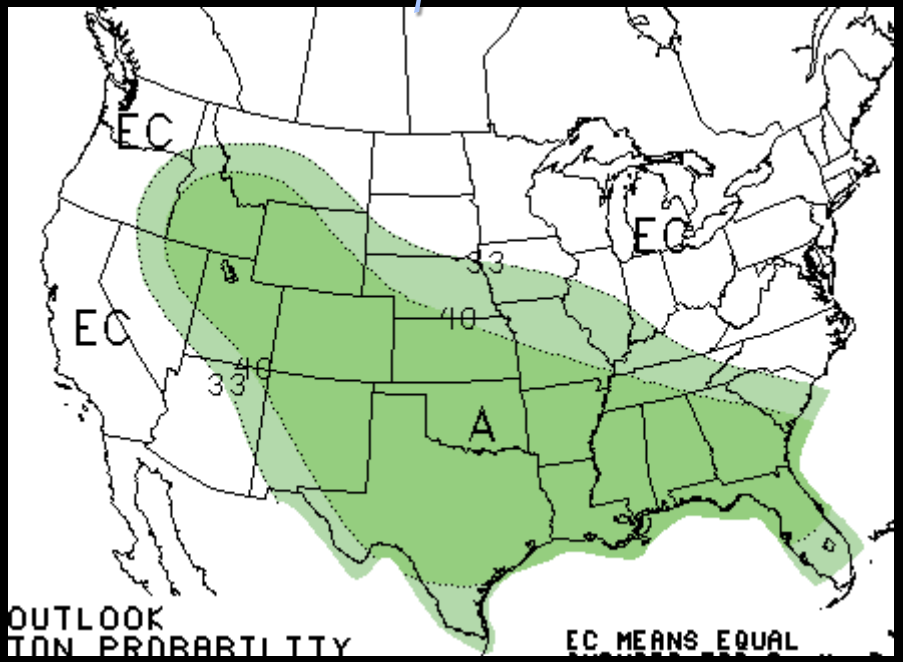
Updated May 21

Temperature



- 33% to 50% chance temperatures will average above normal over west and central Montana
- Equal chances for above, below or near normal east

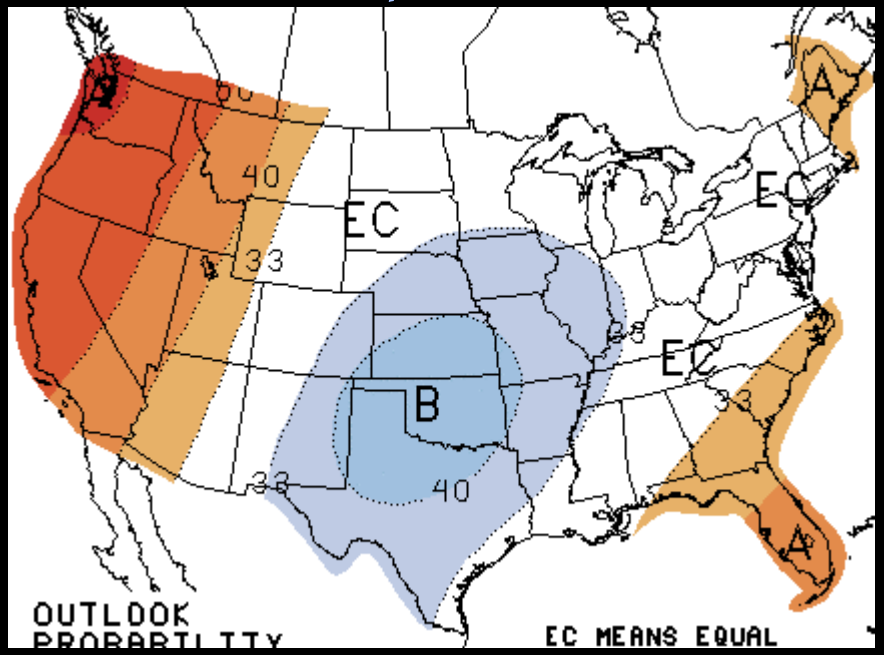
Precipitation



- 33% to 50% chance precipitation will be above average over southern half of Montana
- Equal chances for above, below or near normal north and portions of east

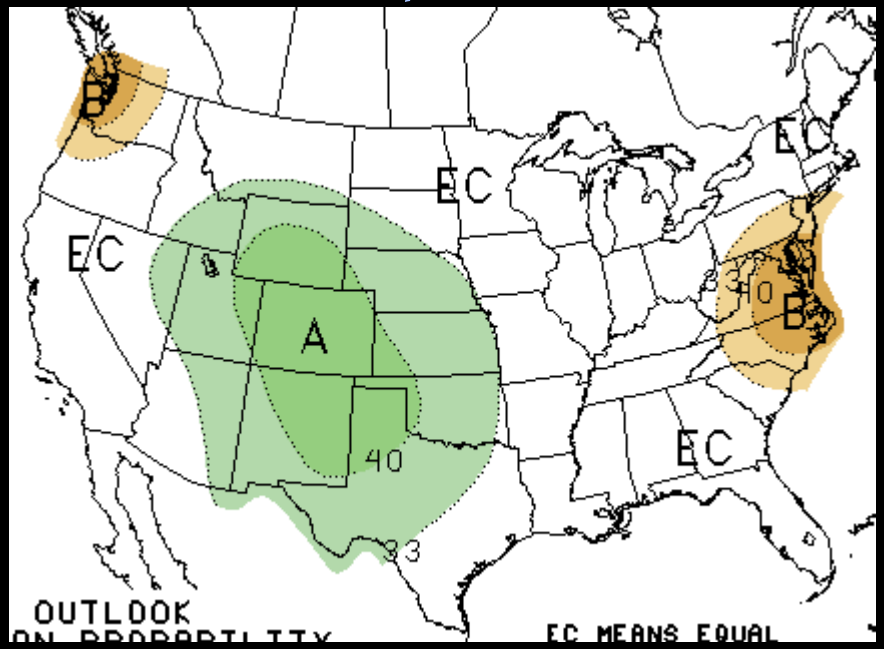
July – September Outlook
Updated May 21

Temperature



- 33% to 50% chance temperatures will be above average over west and central Montana
- Equal chances for above, below, or near average extreme east

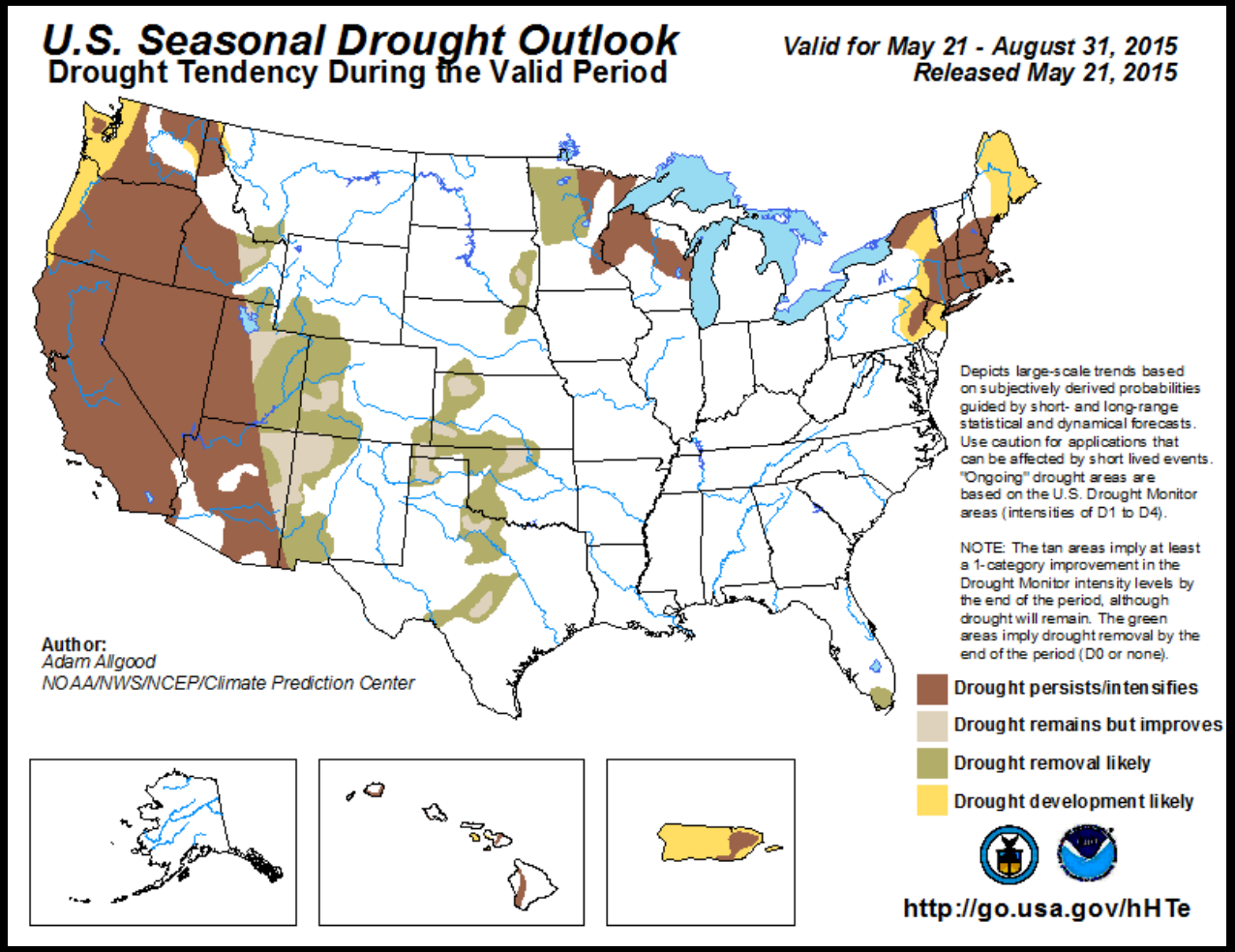
Precipitation



- 33% to 40% chance precipitation will be above average across extreme southern Montana
- Equal chances for above, below, or near average central and north

Drought Outlook through August

Issued May 21



- Drought area in southwest Montana expected to improve

In Summary...

- Conditions were getting notably dry across southern Montana prompting response in National Drought Monitor and Montana Drought and Water Supply Conditions
- Storm mid-May brought widespread rain/snow to much of Montana East of the Divide
  - Stream and river rises noted but no flooding reported
- Currently in period with best chances for precipitation climatologically
  - Current precipitation outlook indicates amounts of an inch or more possible over southern Montana
  - Lesser amounts over northern half of state.
- El Niño has strengthened and strong chances it will persist at least into early winter
- Drought Outlook currently shows no strong chances for areas of Montana sliding into worsening drought conditions

weather.gov

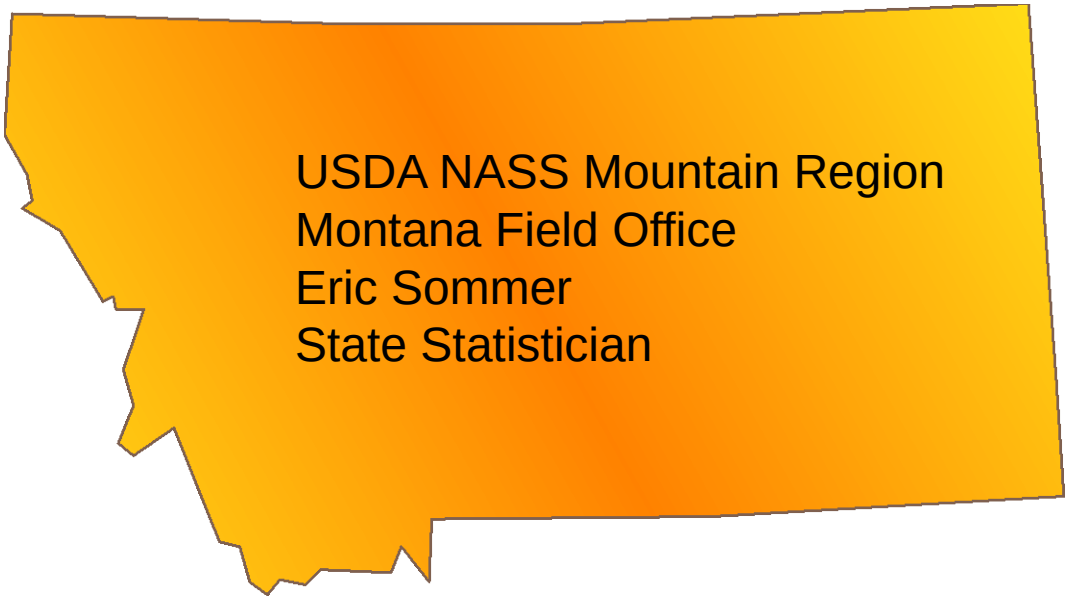
weather.gov/billings

weather.gov/glasgow

weather.gov/missoula

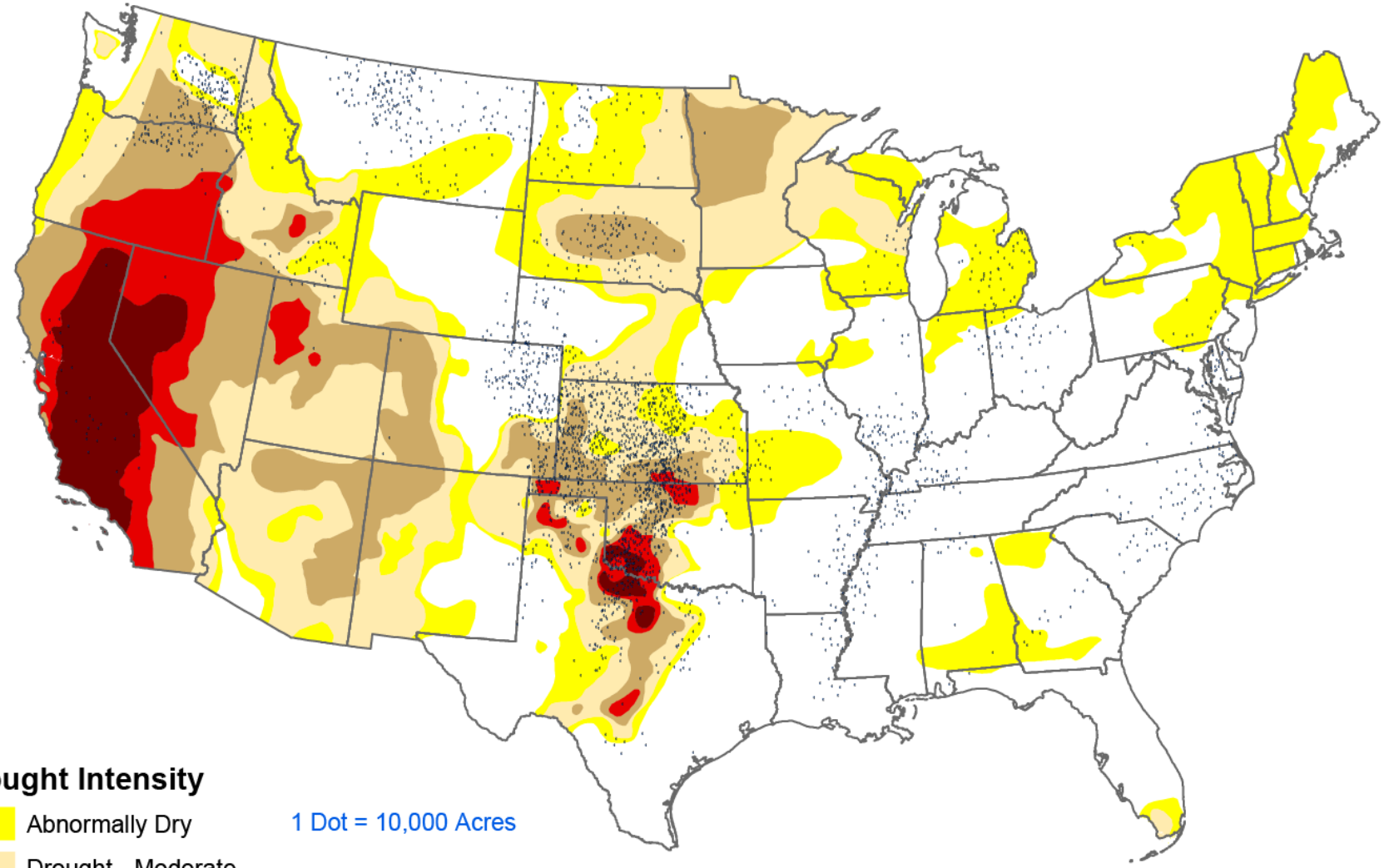
weather.gov/greatfalls

Governor's Drought & Water Supply Advisory Committee



USDA NASS Mountain Region
Montana Field Office
Eric Sommer
State Statistician

U.S. Drought Intensity For May 5, 2015
Compared With Winter Wheat Acreage



Drought Intensity

- Abnormally Dry
- Drought - Moderate
- Drought - Severe
- Drought - Extreme
- Drought - Exceptional

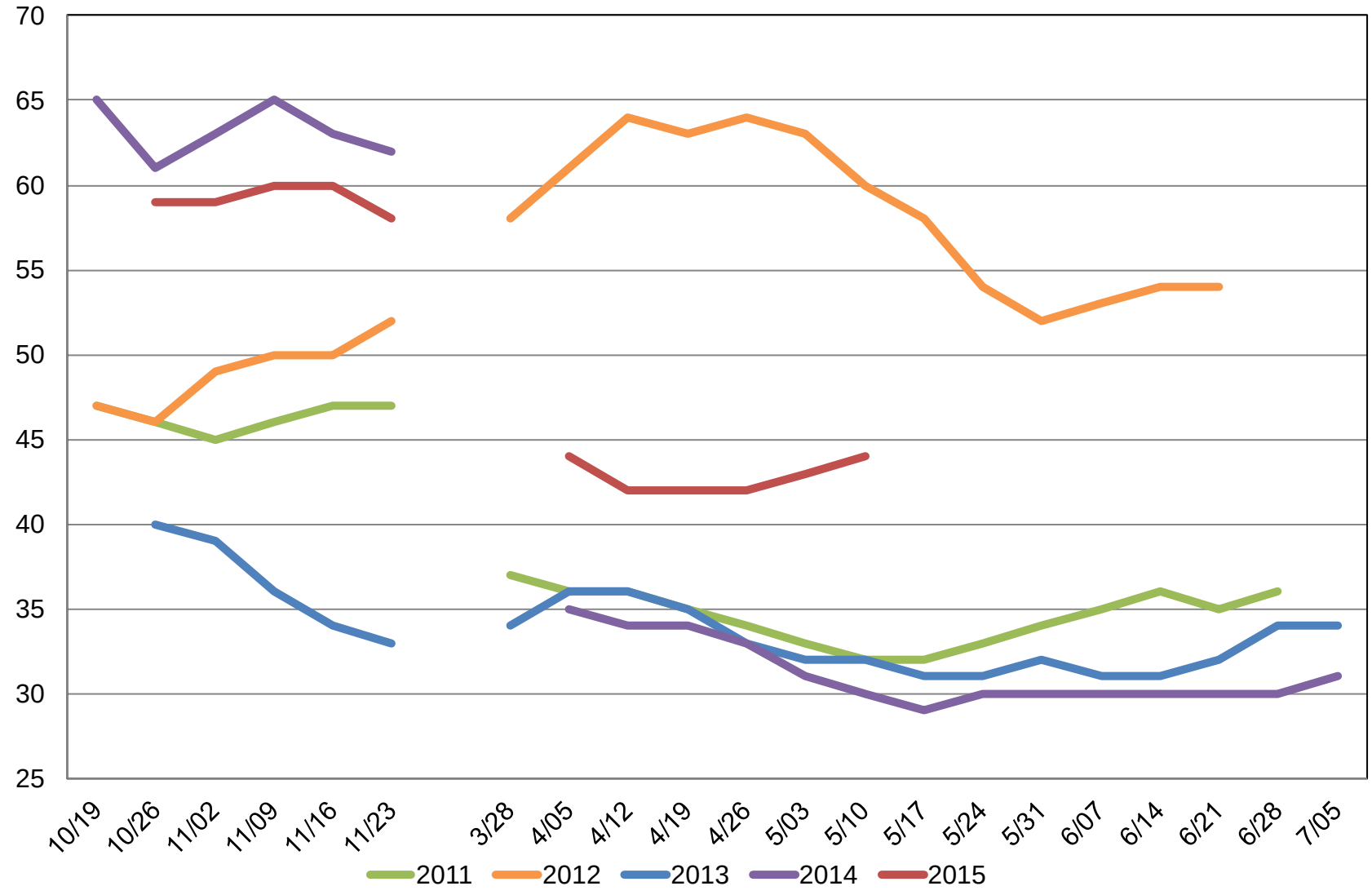
1 Dot = 10,000 Acres

Sources:
2012 Census of Agriculture, USDA-NASS
U.S. Drought Monitor (http://drought.unl.edu/dm/monitor.html)
National Drought Mitigation Center
U.S. Department of Agriculture
National Oceanic and Atmospheric Administration

USDA-NASS
5-12-15

U.S. Winter Wheat Condition

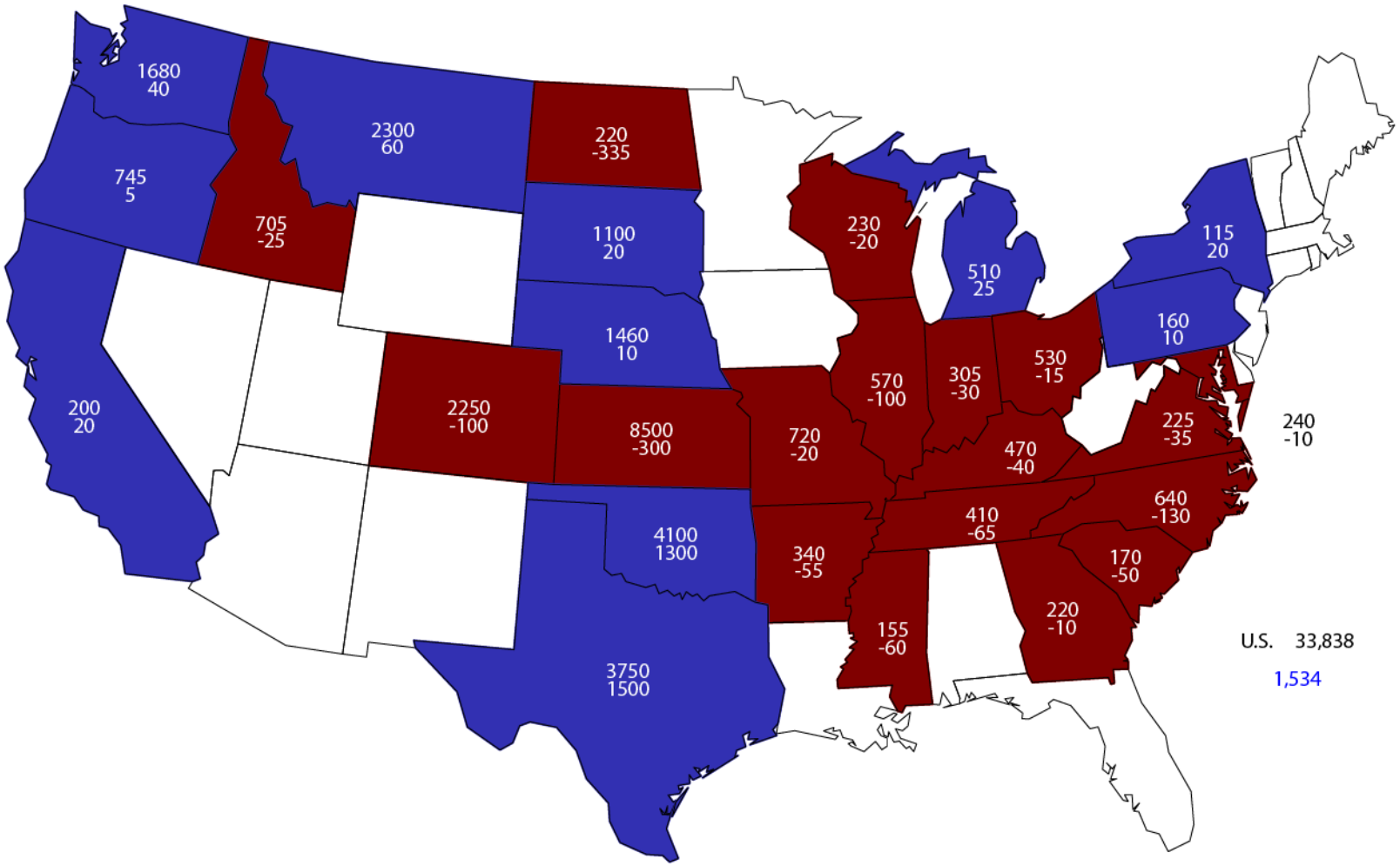
Percent Rated Good to Excellent



USDA-NASS
5-12-15

2015 Winter Wheat Harvested Area

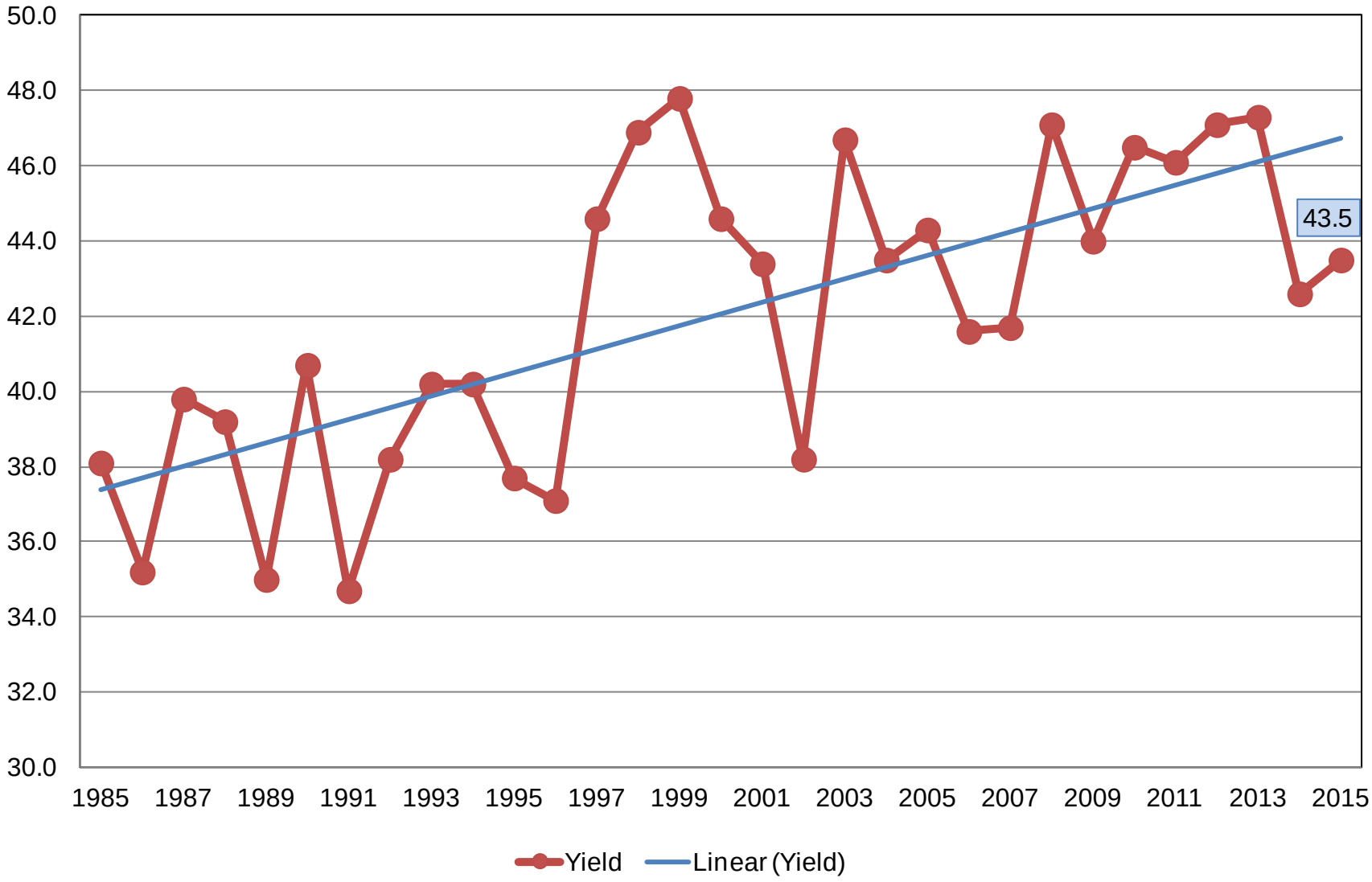
(000) Acres and Change From Previous Year



USDA-NASS
5-12-15

Winter Wheat Yield

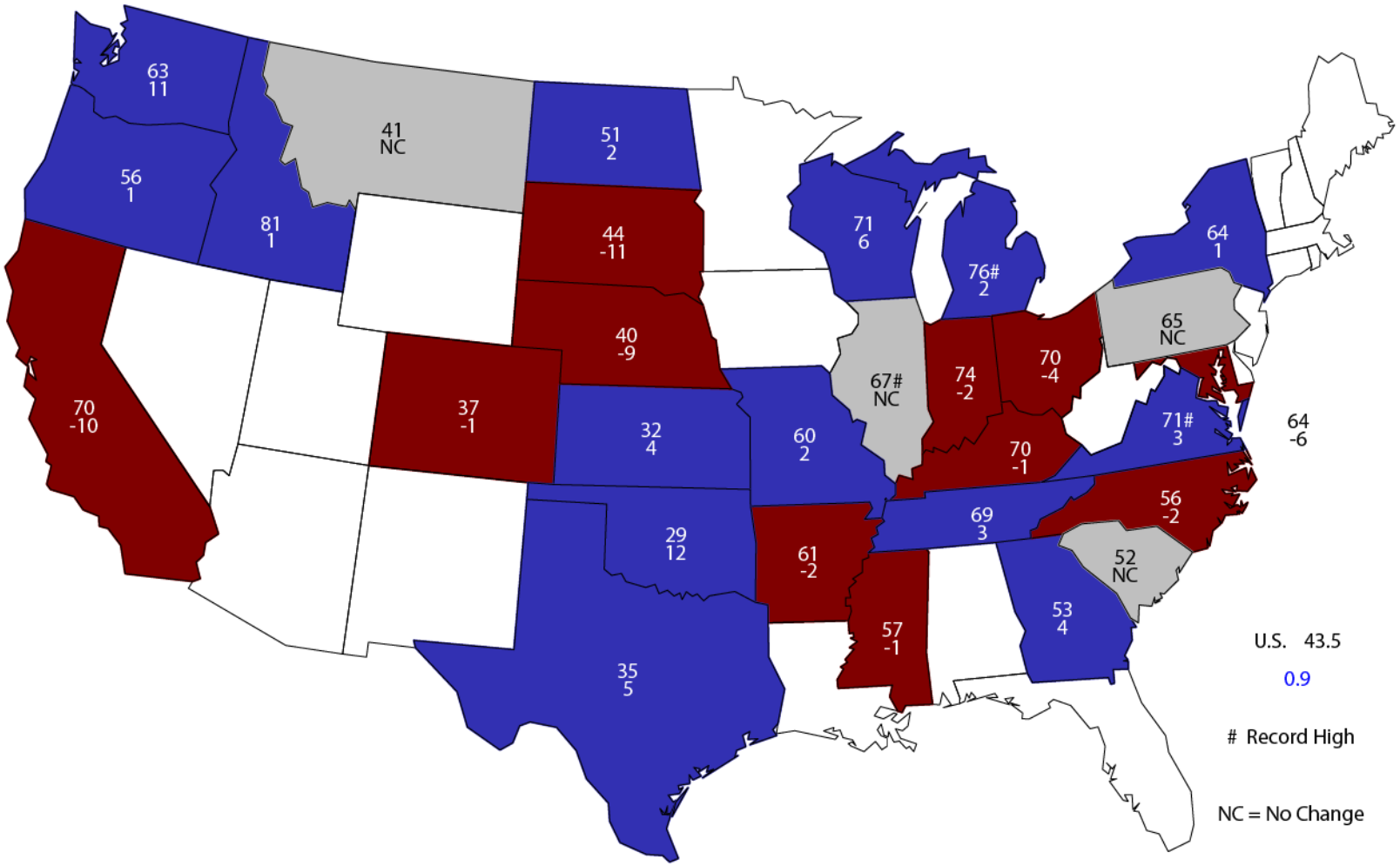
United States



USDA-NASS
5-12-15

2015 Winter Wheat Yield

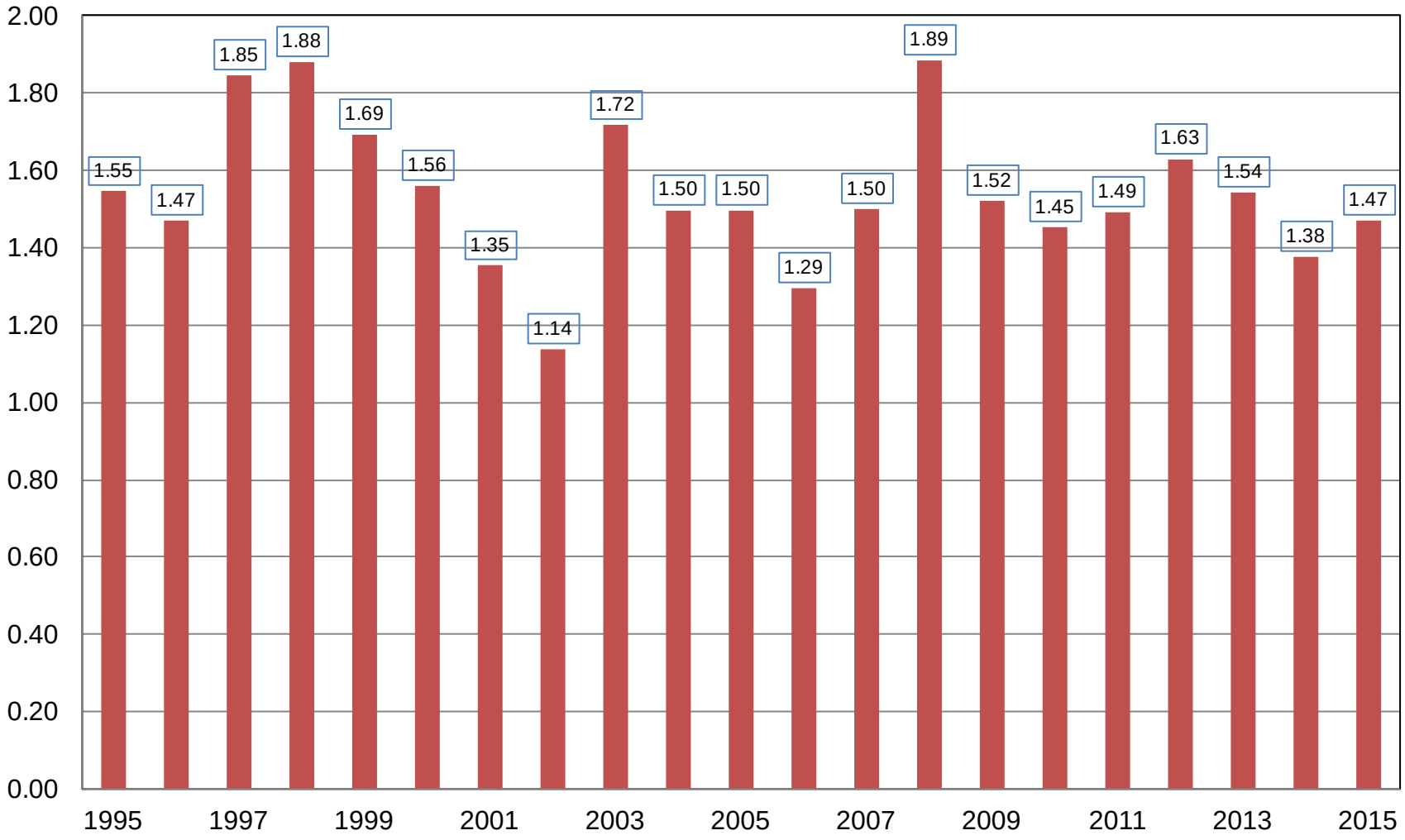
Bushels and Change From Previous Year



USDA-NASS
5-12-15

Winter Wheat Production

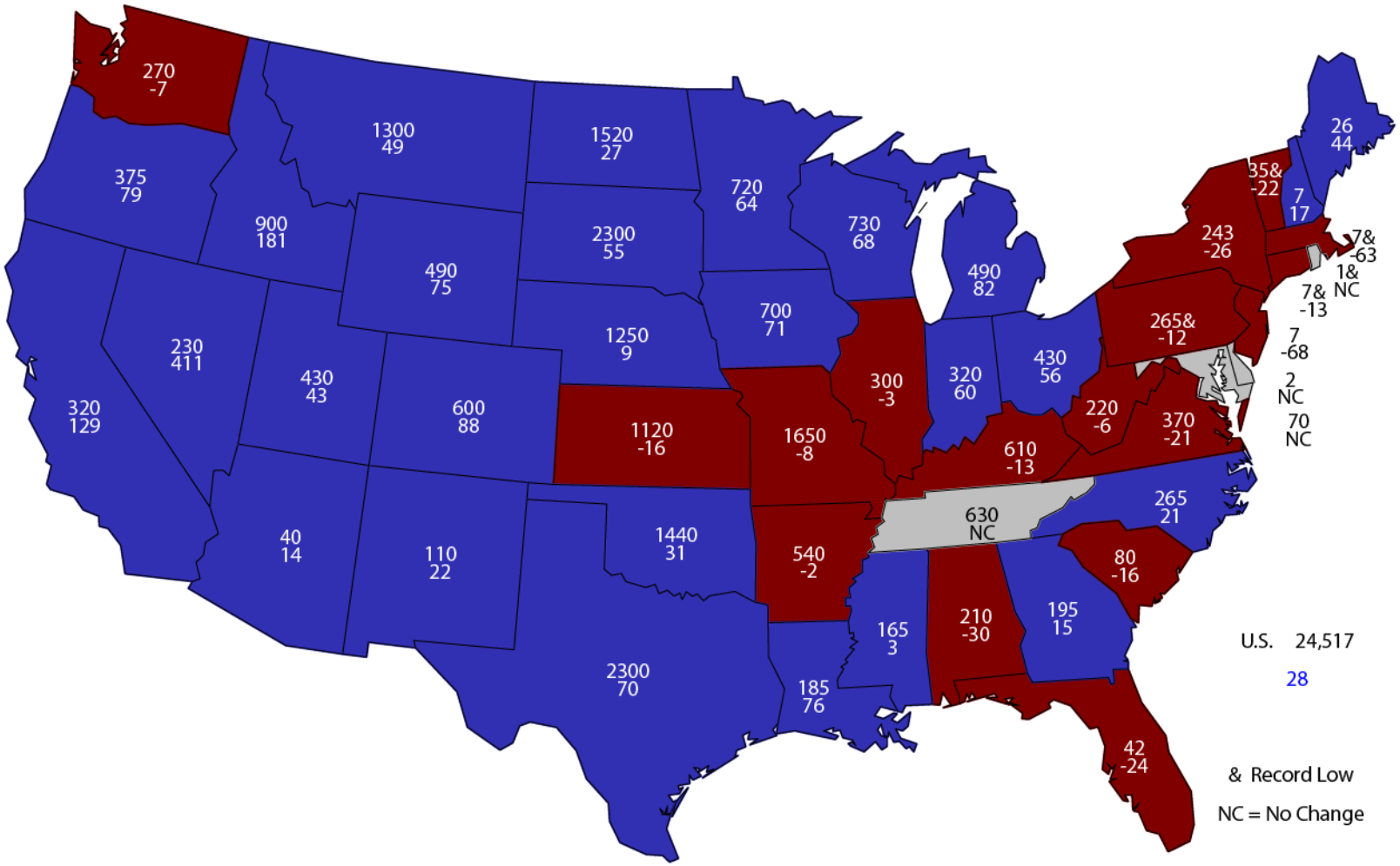
United States



USDA-NASS
5-12-15

May 1, 2015 Hay Stocks

(000) Tons and Percent Change From Previous Year



USDA-NASS
5-12-15

Crop Weather Report
Week Ending May 18, 2015

- Topsoil and subsoil moisture conditions were worse than a year ago and the five year average.

- Producers have made a lot of progress seeding their spring crops. Weeks ahead of both last year and the five year average on most crops. Due to warm and dry conditions.

Topsoil Moisture

Week Ending May 18, 2015

	This week	Last week	Last year	5-yr avg.
Very short	11	9	4	5
Short	29	38	9	17
Adequate	52	47	74	63
Surplus	8	6	13	15

Subsoil Moisture

Week Ending May 18, 2015

	This week	Last week	Last year	5-yr avg.
Very short	8	7	2	7
Short	26	25	12	18
Adequate	53	55	81	66
Surplus	13	13	5	9

Winter Wheat Condition
Week Ending May 18, 2015

	Very poor	Poor	Fair	Good	Excellent
This week	3	7	32	39	19
Last week	2	6	31	39	22
Last year	2	5	29	45	19
5-yr avg.	2	7	29	48	14

Seeding Completed
Week Ending May 18, 2015

	This week	Last week	Last year	5-yr avg.
Spring Wheat	95	86	71	72
Durum Wheat	96	67	45	53
Barley	98	92	86	81
Oats	89	79	54	64
Dry Peas	95	88	81	80
Lentils	84	64	68	77
Flaxseed	79	58	40	46
Canola	87	77	67	68

Seeding Completed
Week Ending May 18, 2015

	This week	Last week	Last year	5-yr avg.
Corn	80	56	49	59
Potatoes	44	12	13	38
Sugar Beets	96	89	97	80

Emerged
Week Ending May 18, 2015

	This week	Last week	Last year	5-yr avg.
Spring Wheat	70	57	32	31
Durum Wheat	30	16	9	15
Barley	82	66	37	41
Oats	47	36	20	29
Dry Peas	53	24	40	28
Canola	32	5	19	20
Sugar Beets	76	48	42	40

Livestock Grazing
Week Ending May 18, 2015

- 55 percent of Cattle and Calves have been moved to summer ranges, behind last years 59 percent but ahead of the five-year average of 49 percent.
- 64 percent of Sheep and Lambs have been moved to summer ranges, ahead of last years 55 percent and the five-year average of 43 percent.
- 31 percent of cattle & calves and 25 percent of sheep & lambs were receiving supplemental feed

Range & Pasture Feed Condition

Week Ending May 18, 2015

	Very poor	Poor	Fair	Good	Excellent
This week	5	14	48	30	3
Last week	4	14	49	32	1
Last year	2	14	37	41	6
5-yr avg.	5	15	36	37	7

Calving & Lambing Completed
Week Ending May 18, 2015

- 96 percent of cows have calved, ahead of last year's 92 percent and the same as the five-year average of 96 percent.
- 95 percent of ewes have lambed, compared to 85 percent last year and 87 percent for the five-year average.

Surveys

- June Acreage Surveys
- June Hogs
- June Grain Stocks
- Montana Wheat Varieties Survey
- Equine NAHMS (Herd Health)
- CEAP (Conservation Effects Assessment Project)
- July Cattle

June Releases

- June Hog Report released on June 26

- June Acreage, and June Stocks Reports released on June 30

Summary
Week ending May 18, 2015

- Soil moisture conditions continue to be below average due to warm/dry weather
- 4.6 days were suitable for field work during the week, compared to 5.3 days last year and 5.3 days for the five-year average
- Spring planting of most crops is almost finished, well ahead of last year and the five year average

USDA, NASS, Montana Field Office

Eric Sommer, State Statistician

1-800-835-2612 or 406-441-1240

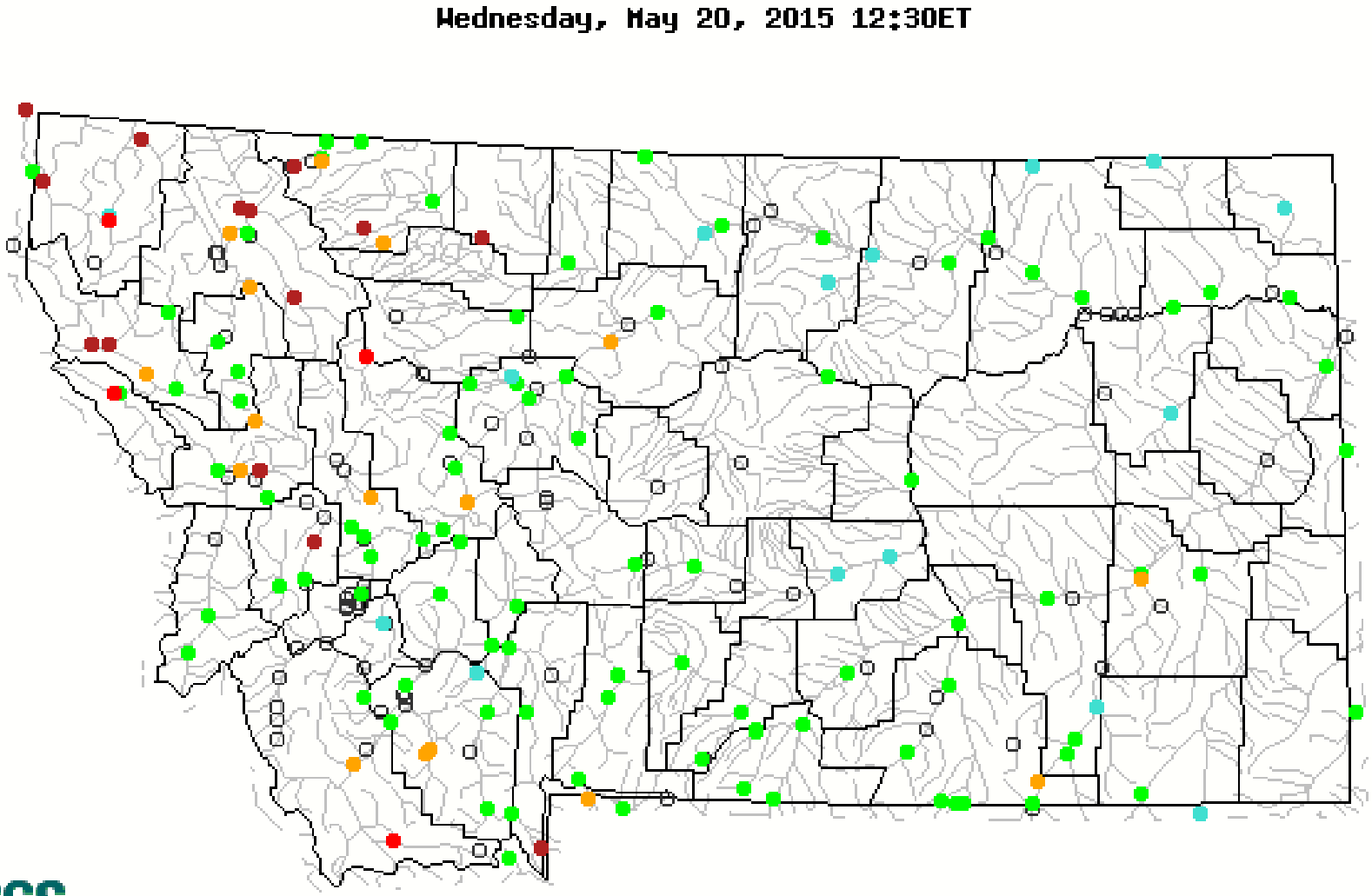
Email: nass-mt@nass.usda.gov

www.nass.usda.gov/mt/

http://www.nass.usda.gov/Statistics_by_State/Montana Publications/Crop_Progress_&_Condition/index.asp

USGS Streamflows, May 2014

DAILY STREAMFLOW CONDITIONS



USGS

Dry Normal Wet

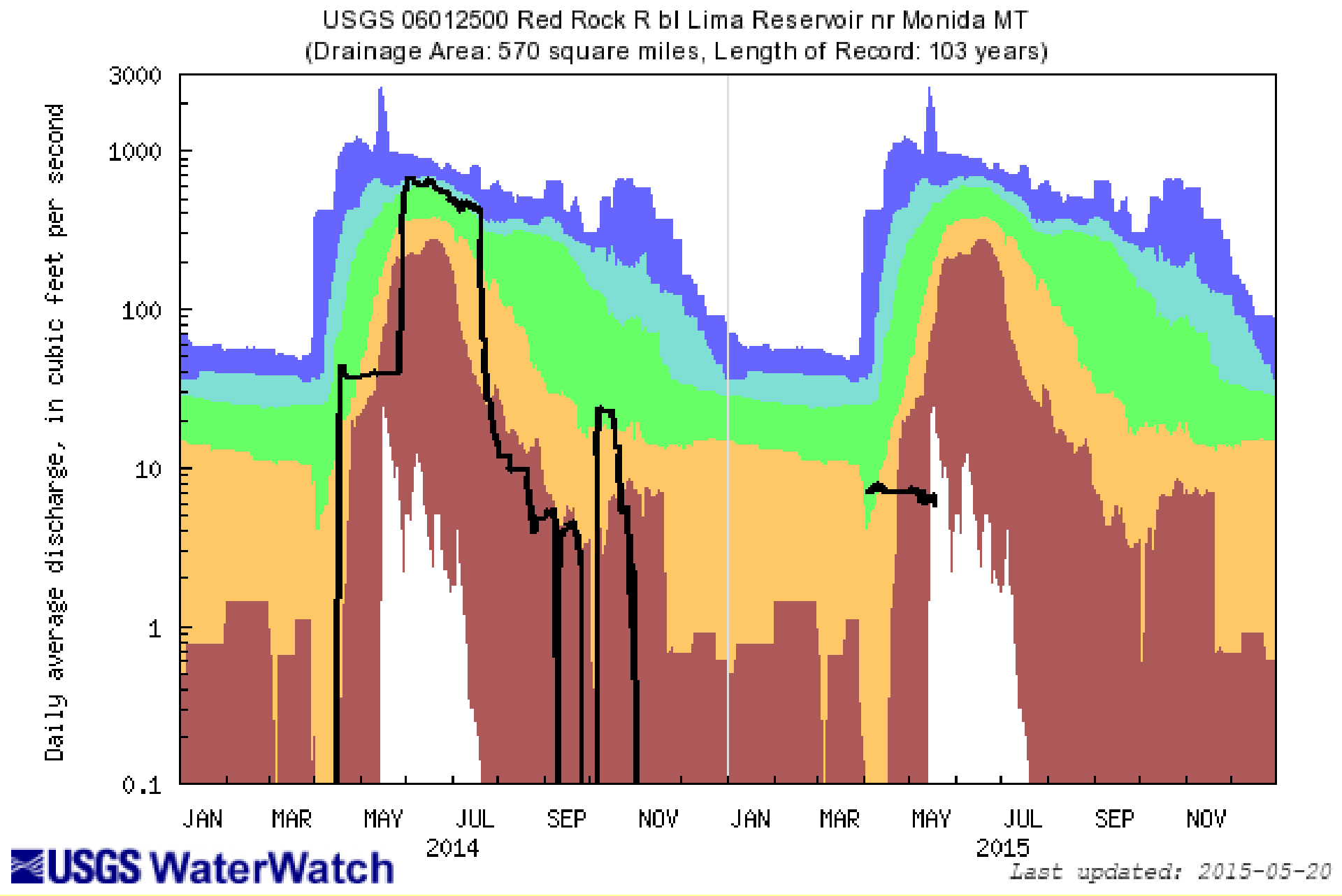
New Minimum Discharge for May 20

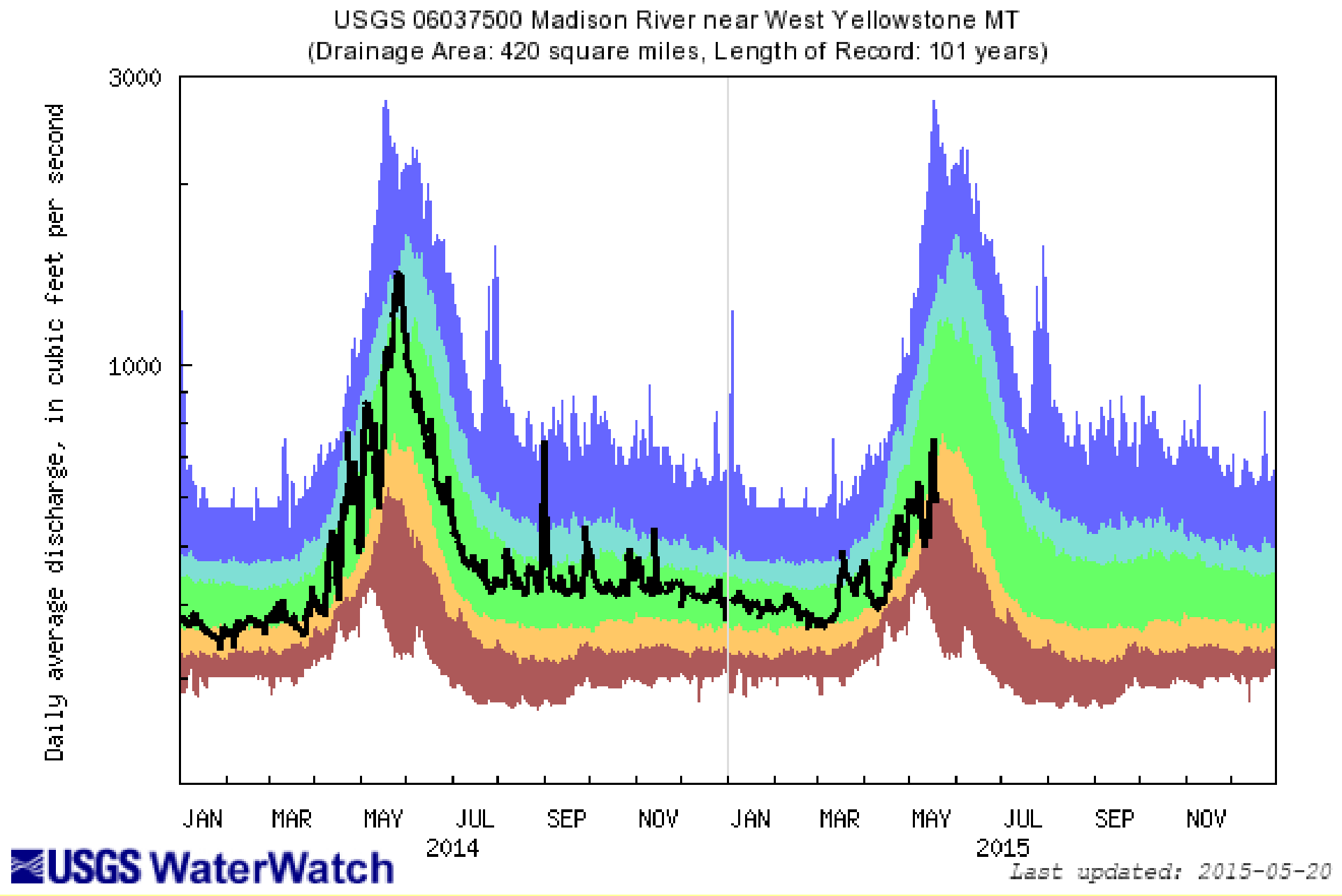
06012500 – Red Rock River below Lima Reservoir, near Monida

06078500 – North Fork Sun River near Augusta

12302055 – Fisher River near Libby

12354000 – St Regis River near St Regis


USGS 06012500 Red Rock R bl Lima Reservoir nr Monida MT
(Drainage Area: 570 square miles, Length of Record: 103 years)
Daily average discharge, in cubic feet per second
3000
1000
100
10
1
0.1
JAN
MAR
MAY
JUL
SEP
NOV
2014
2015
USGS WaterWatch
Last updated: 2015-05-20
Explanation - Percentile classes
lowest-10th percentile
10-24
25-75
76-90
90th percentile -highest
Flow
Much below normal
Below normal
Normal
Above normal
Much above normal


USGS 06037500 Madison River near West Yellowstone MT
(Drainage Area: 420 square miles, Length of Record: 101 years)
Daily average discharge, in cubic feet per second
3000
1000
JAN
MAR
MAY
JUL
SEP
NOV
2014
2015
USGS WaterWatch
Last updated: 2015-05-20
Explanation - Percentile classes
lowest-10th percentile
10-24
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76-90
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Flow
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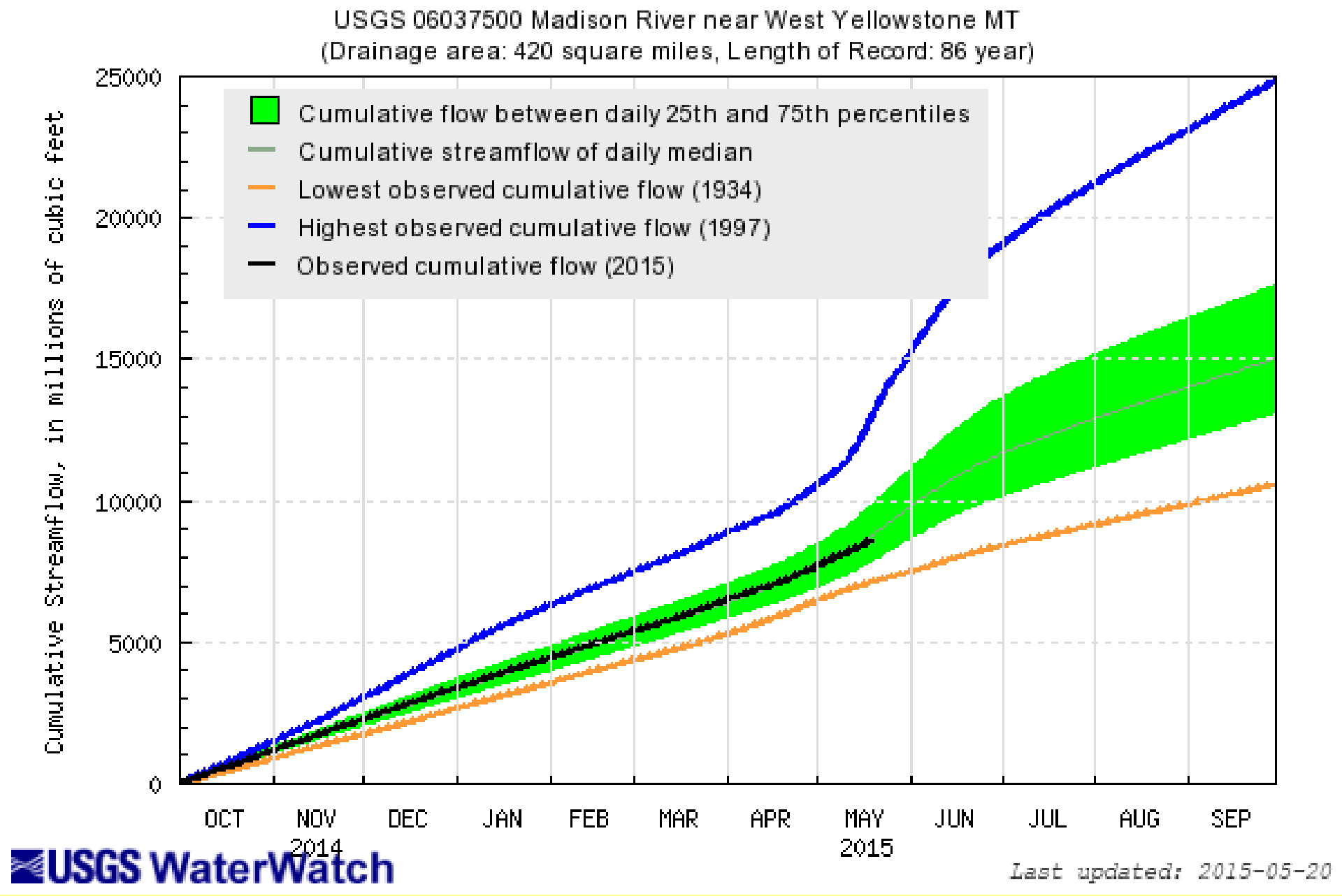
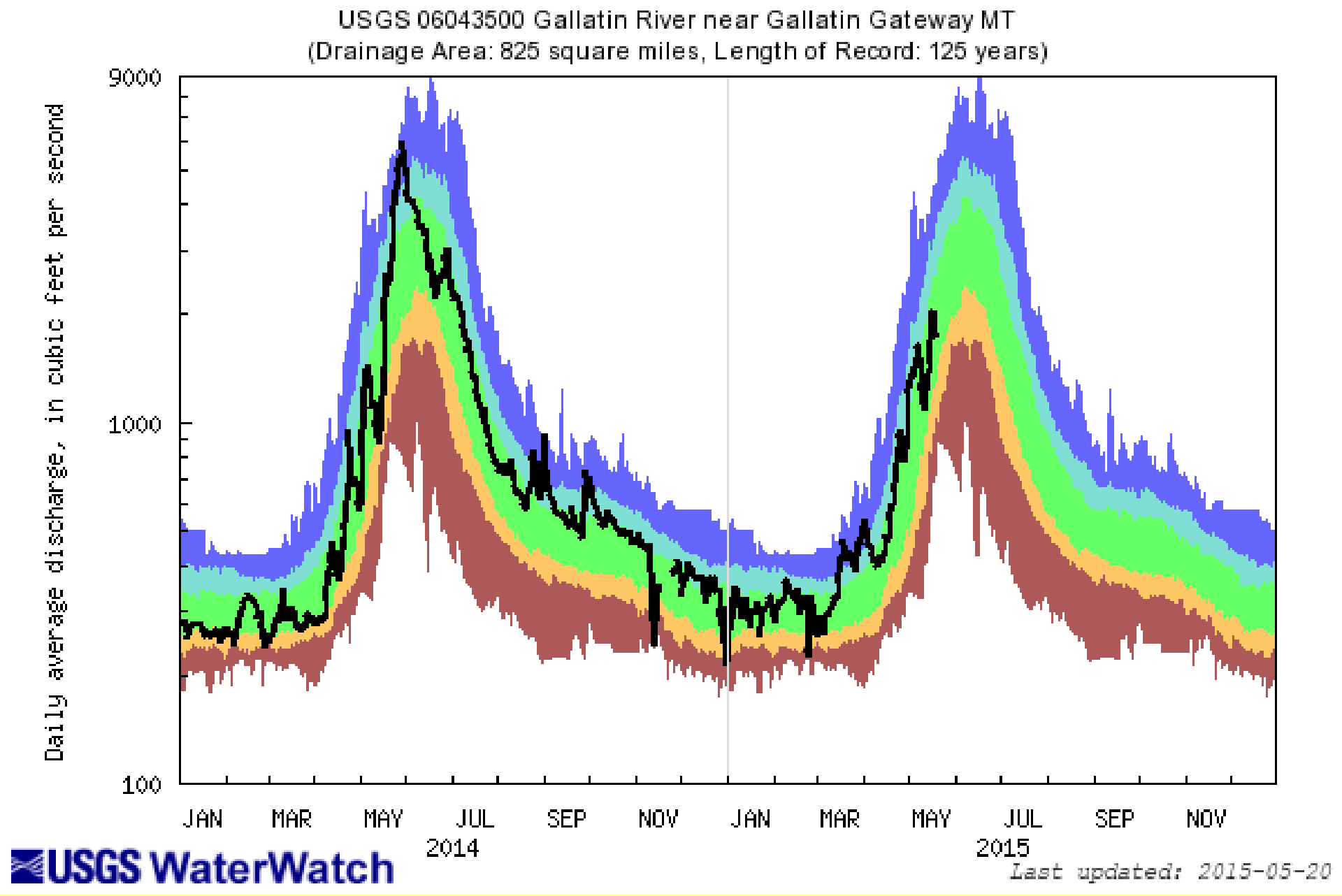
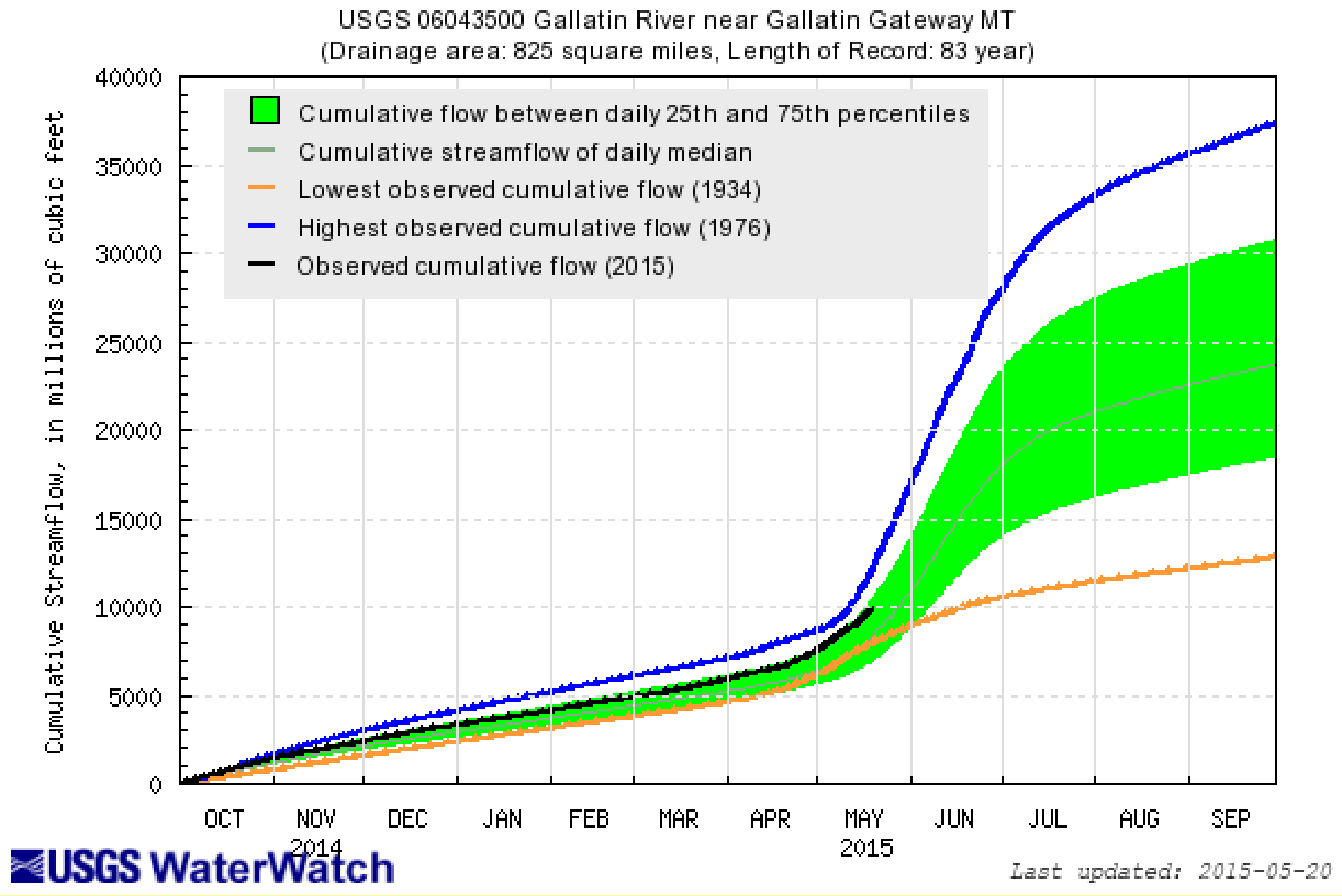
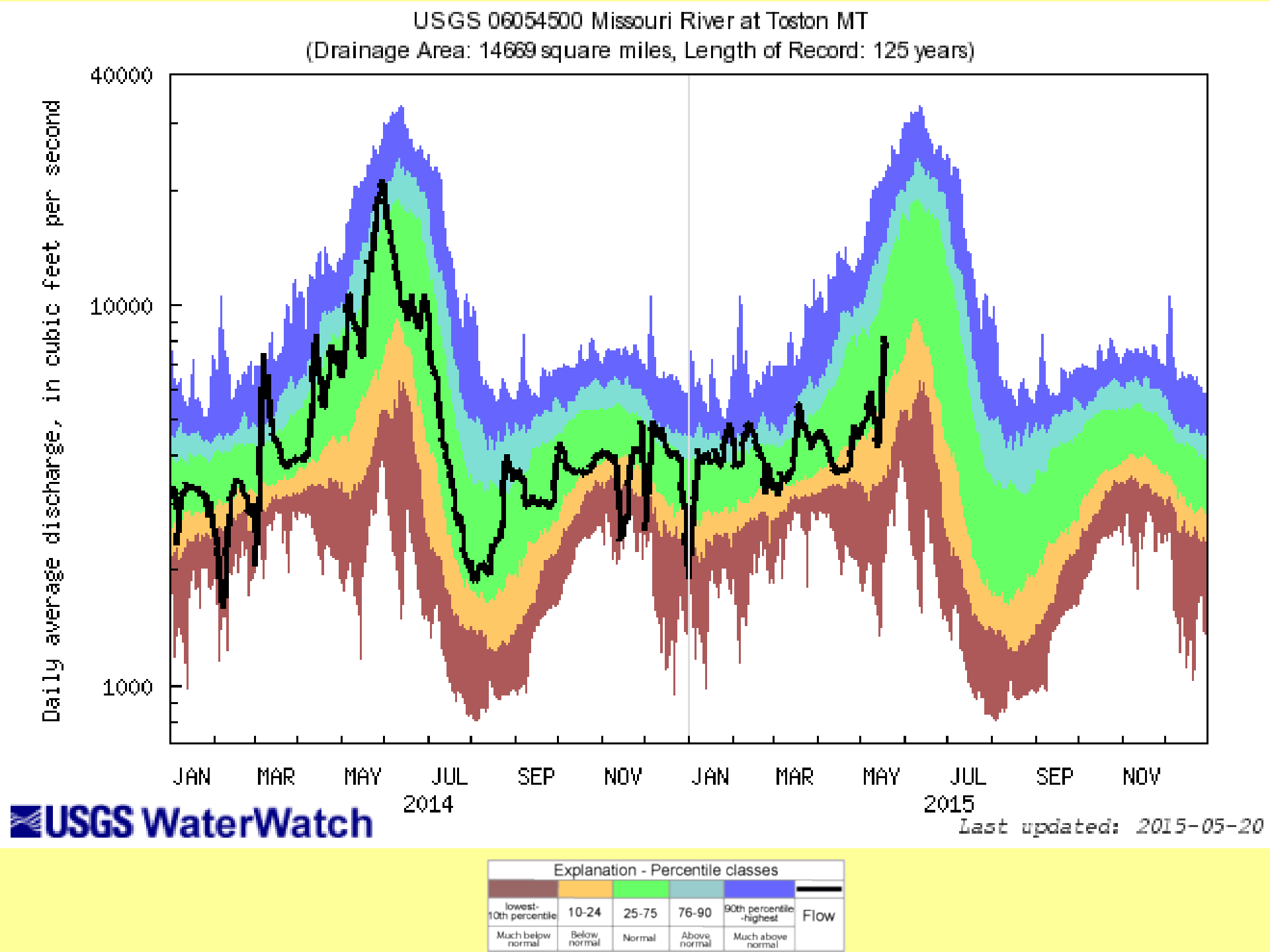
Below normal
Normal
Above normal
Much above normal


USGS 06037500 Madison River near West Yellowstone MT
(Drainage area: 420 square miles, Length of Record: 86 year)
Cumulative flow between daily 25th and 75th percentiles
Cumulative streamflow of daily median
Lowest observed cumulative flow (1934)
Highest observed cumulative flow (1997)
Observed cumulative flow (2015)
Cumulative Streamflow, in millions of cubic feet
25000
20000
15000
10000
5000
0
OCT
NOV
2014
DEC
JAN
FEB
MAR
APR
MAY
2015
JUN
JUL
AUG
SEP
USGS WaterWatch
Last updated: 2015-05-20


USGS 06043500 Gallatin River near Gallatin Gateway MT
(Drainage Area: 825 square miles, Length of Record: 125 years)
Daily average discharge, in cubic feet per second
9000
1000
100
JAN
MAR
MAY
JUL
SEP
NOV
2014
2015
USGS WaterWatch
Last updated: 2015-05-20
Explanation - Percentile classes
lowest-10th percentile
10-24
25-75
76-90
90th percentile -highest
Flow
Much below normal
Below normal
Normal
Above normal
Much above normal


USGS 06043500 Gallatin River near Gallatin Gateway MT
(Drainage area: 825 square miles, Length of Record: 83 year)
Cumulative flow between daily 25th and 75th percentiles
Cumulative streamflow of daily median
Lowest observed cumulative flow (1934)
Highest observed cumulative flow (1976)
Observed cumulative flow (2015)
Cumulative Streamflow, in millions of cubic feet
40000
35000
30000
25000
20000
15000
10000
5000
0
OCT
NOV
2014
DEC
JAN
FEB
MAR
APR
MAY
2015
JUN
JUL
AUG
SEP
USGS WaterWatch
Last updated: 2015-05-20


USGS 06054500 Missouri River at Toston MT
(Drainage Area: 14669 square miles, Length of Record: 125 years)
Daily average discharge, in cubic feet per second
40000
10000
1000
JAN
MAR
MAY
JUL
SEP
NOV
JAN
MAR
MAY
JUL
SEP
NOV
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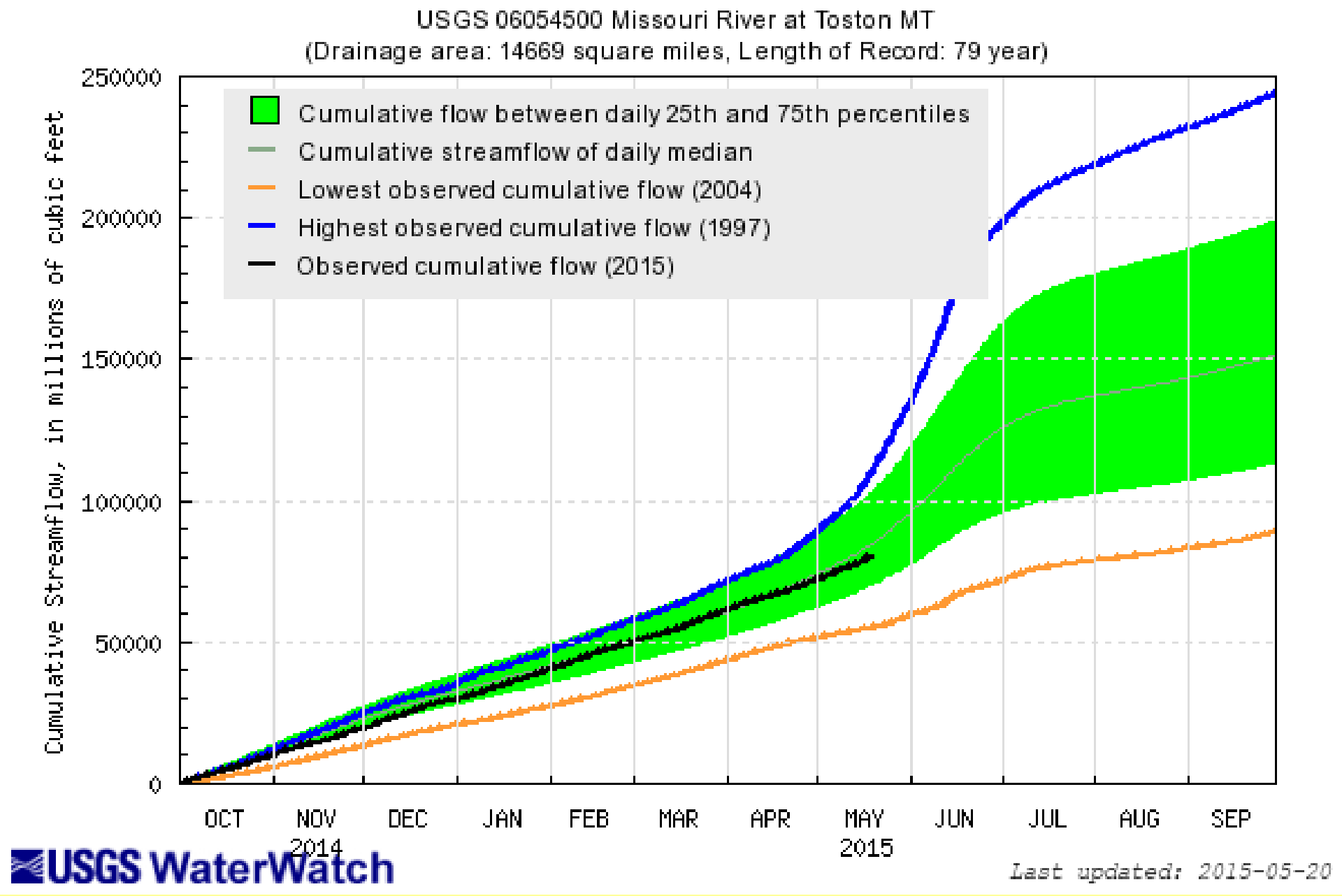
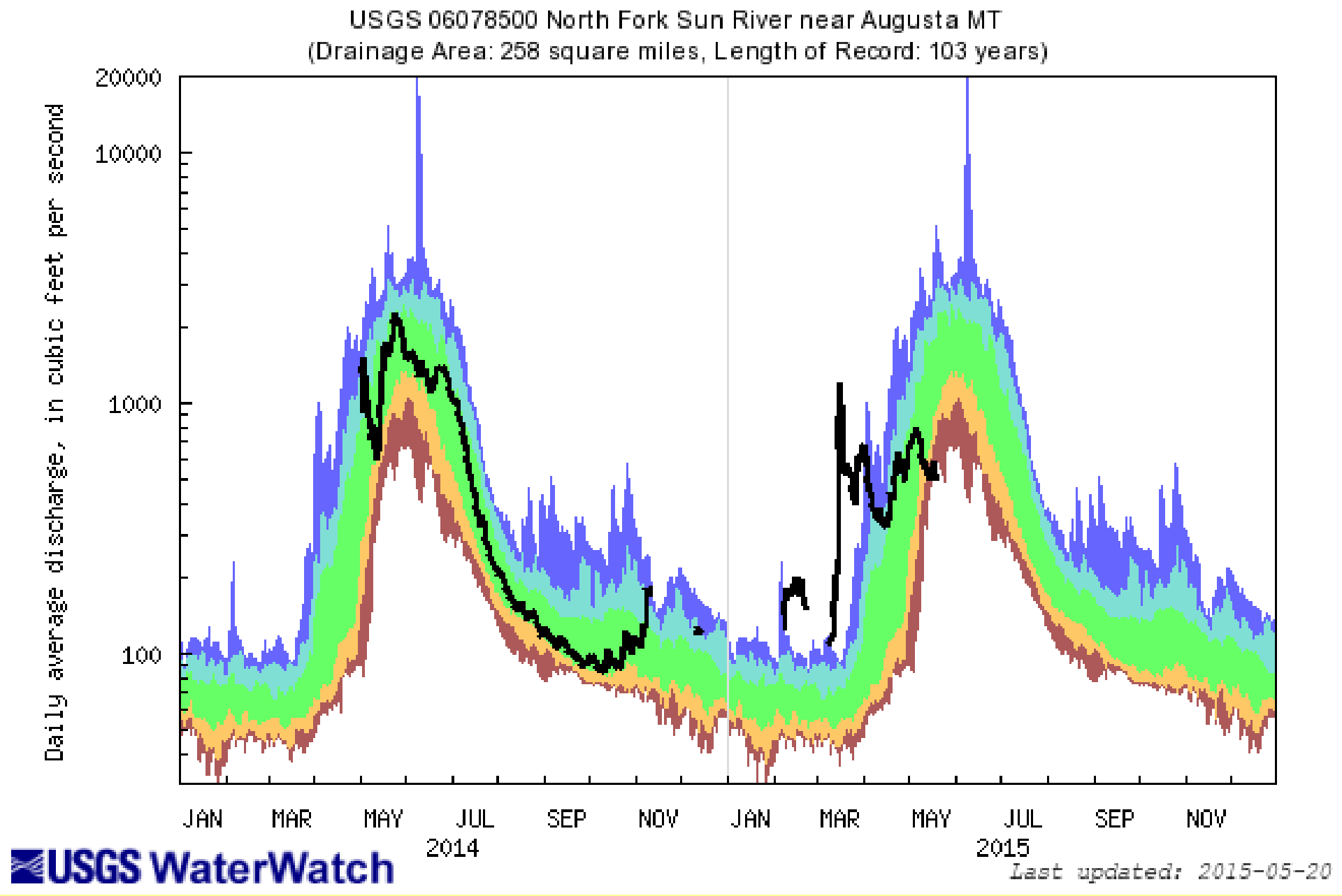

USGS 06054500 Missouri River at Toston MT
(Drainage area: 14669 square miles, Length of Record: 79 year)
Cumulative flow between daily 25th and 75th percentiles
Cumulative streamflow of daily median
Lowest observed cumulative flow (2004)
Highest observed cumulative flow (1997)
Observed cumulative flow (2015)
Cumulative Streamflow, in millions of cubic feet
250000
200000
150000
100000
50000
0
OCT
NOV
2014
DEC
JAN
FEB
MAR
APR
MAY
2015
JUN
JUL
AUG
SEP
USGS WaterWatch
Last updated: 2015-05-20


USGS 06078500 North Fork Sun River near Augusta MT
(Drainage Area: 258 square miles, Length of Record: 103 years)
Daily average discharge, in cubic feet per second
20000
10000
1000
100
JAN
MAR
MAY
JUL
SEP
NOV
2014
2015
USGS WaterWatch
Last updated: 2015-05-20
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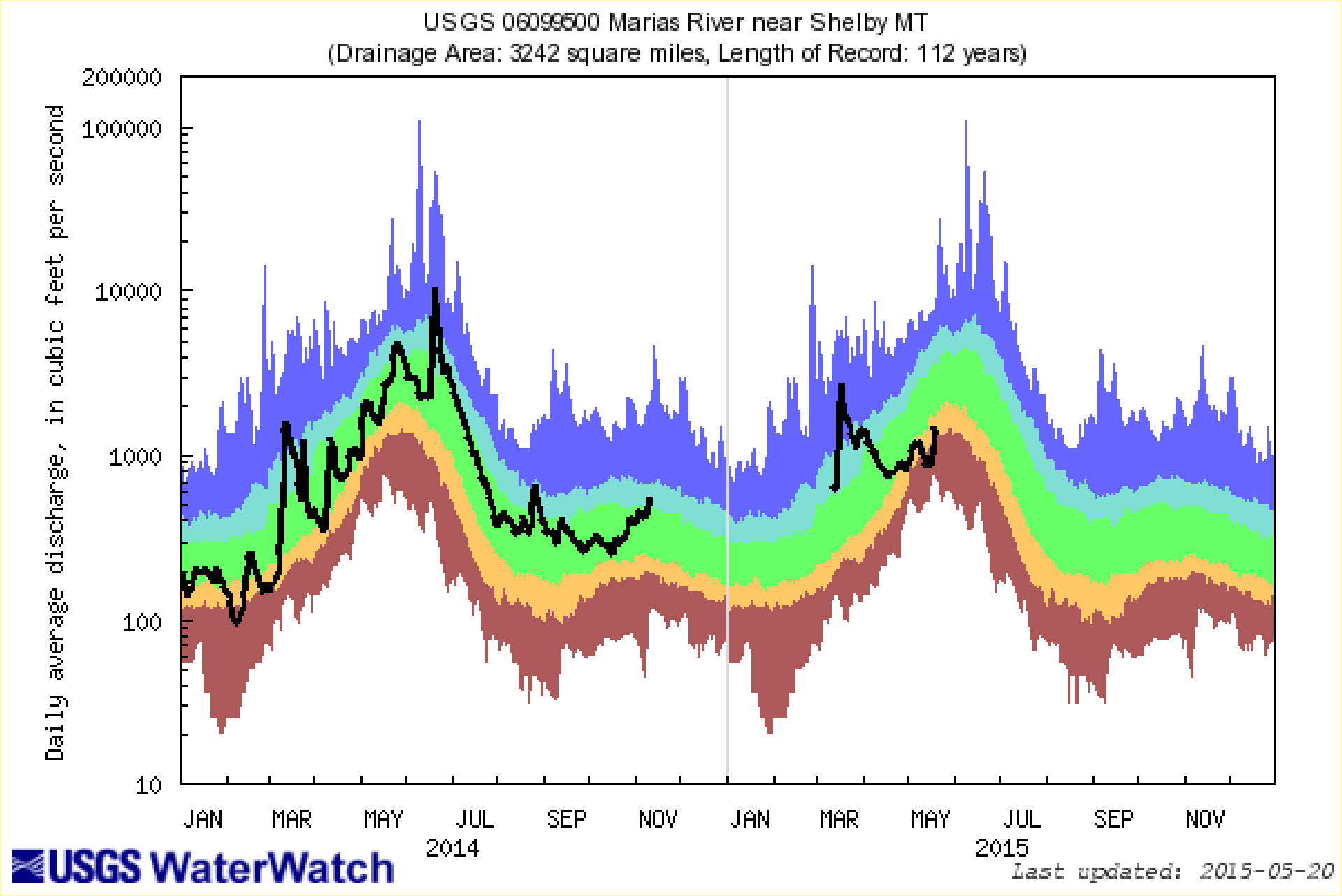
Above normal
Much above normal


USGS 06099500 Marias River near Shelby MT
(Drainage Area: 3242 square miles, Length of Record: 112 years)
Daily average discharge, in cubic feet per second
200000
100000
10000
1000
100
10
JAN
MAR
MAY
JUL
SEP
NOV
2014
2015
USGS WaterWatch
Last updated: 2015-05-20
Explanation - Percentile classes
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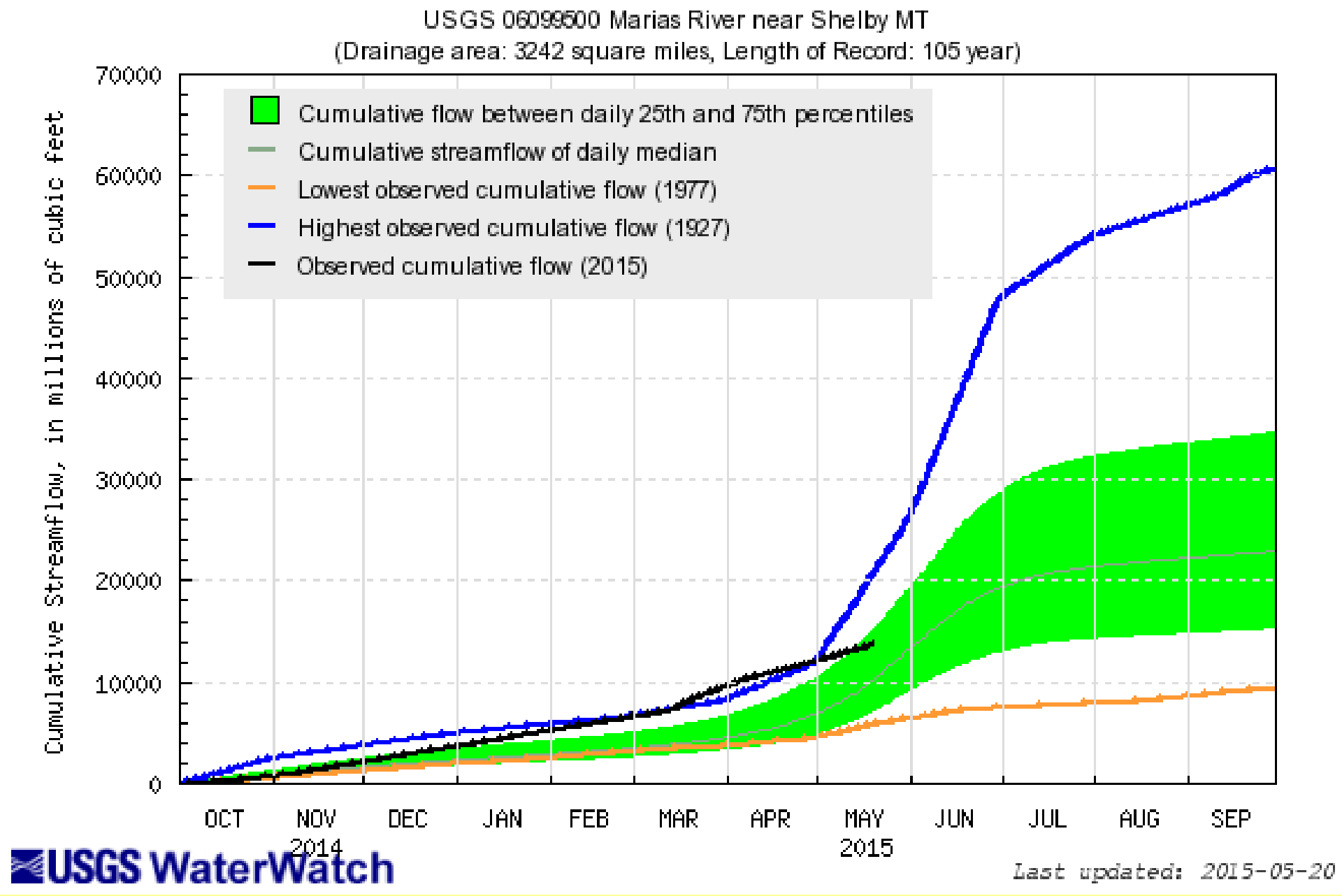
Above normal
Much above normal



USGS WaterWatch

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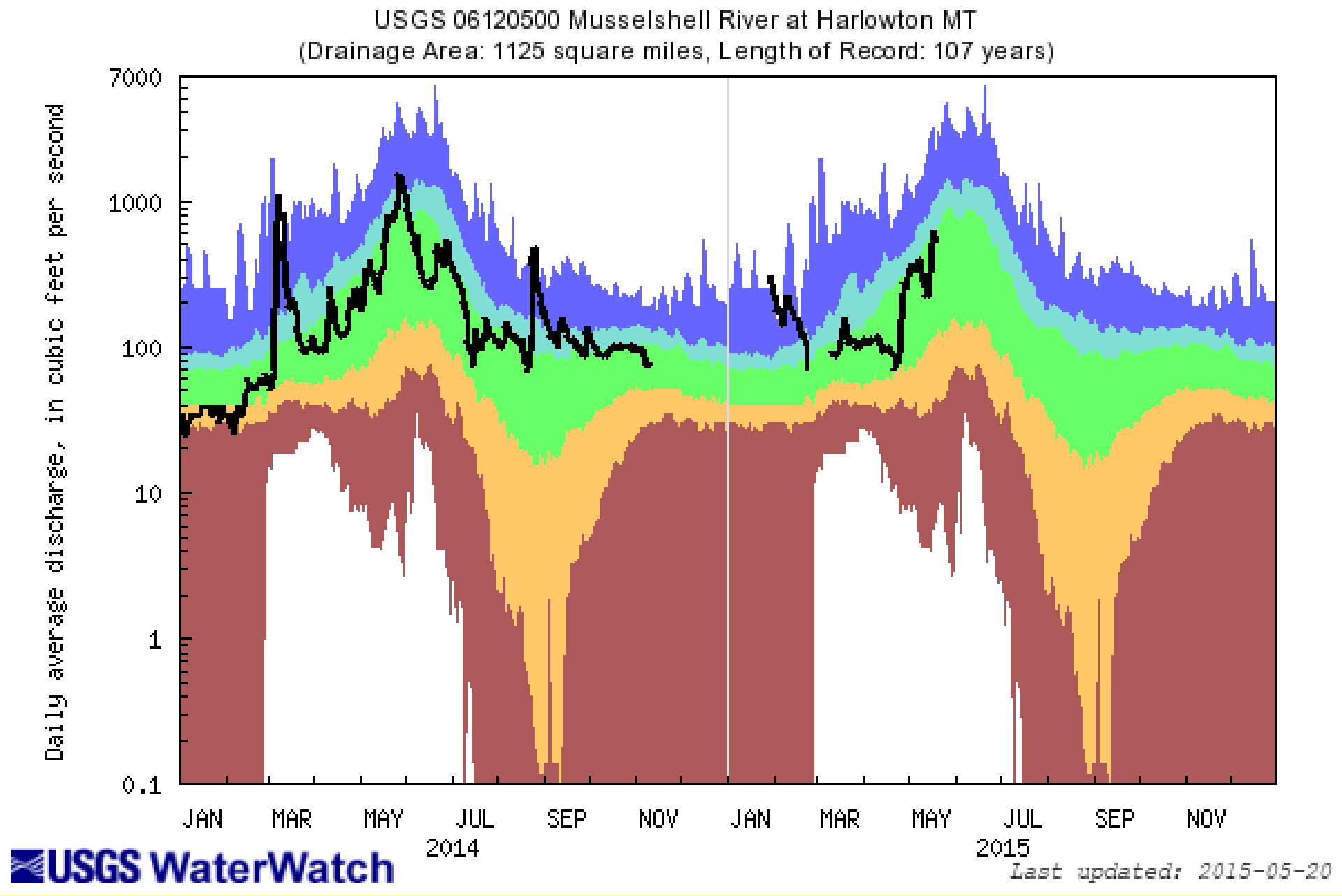
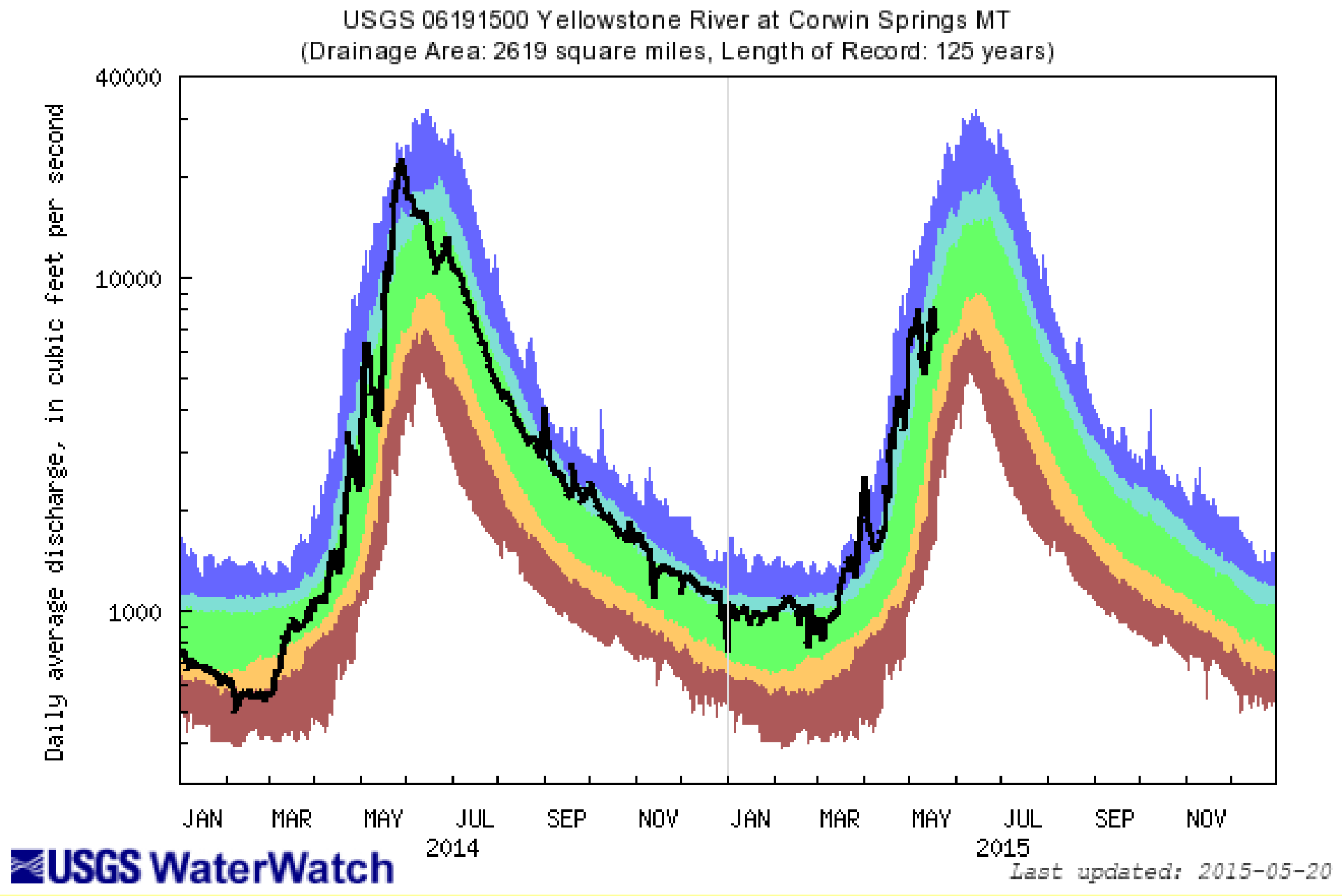
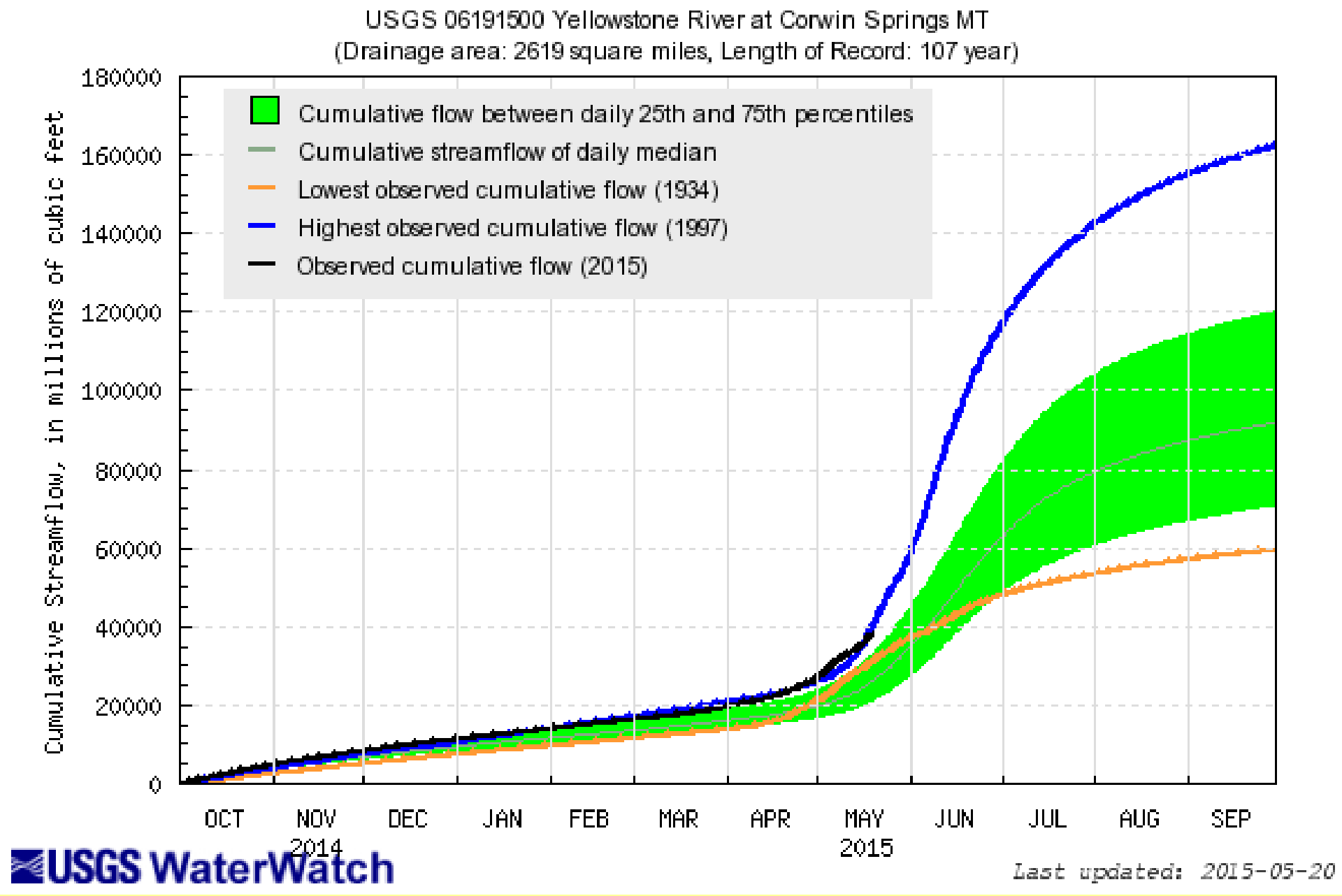
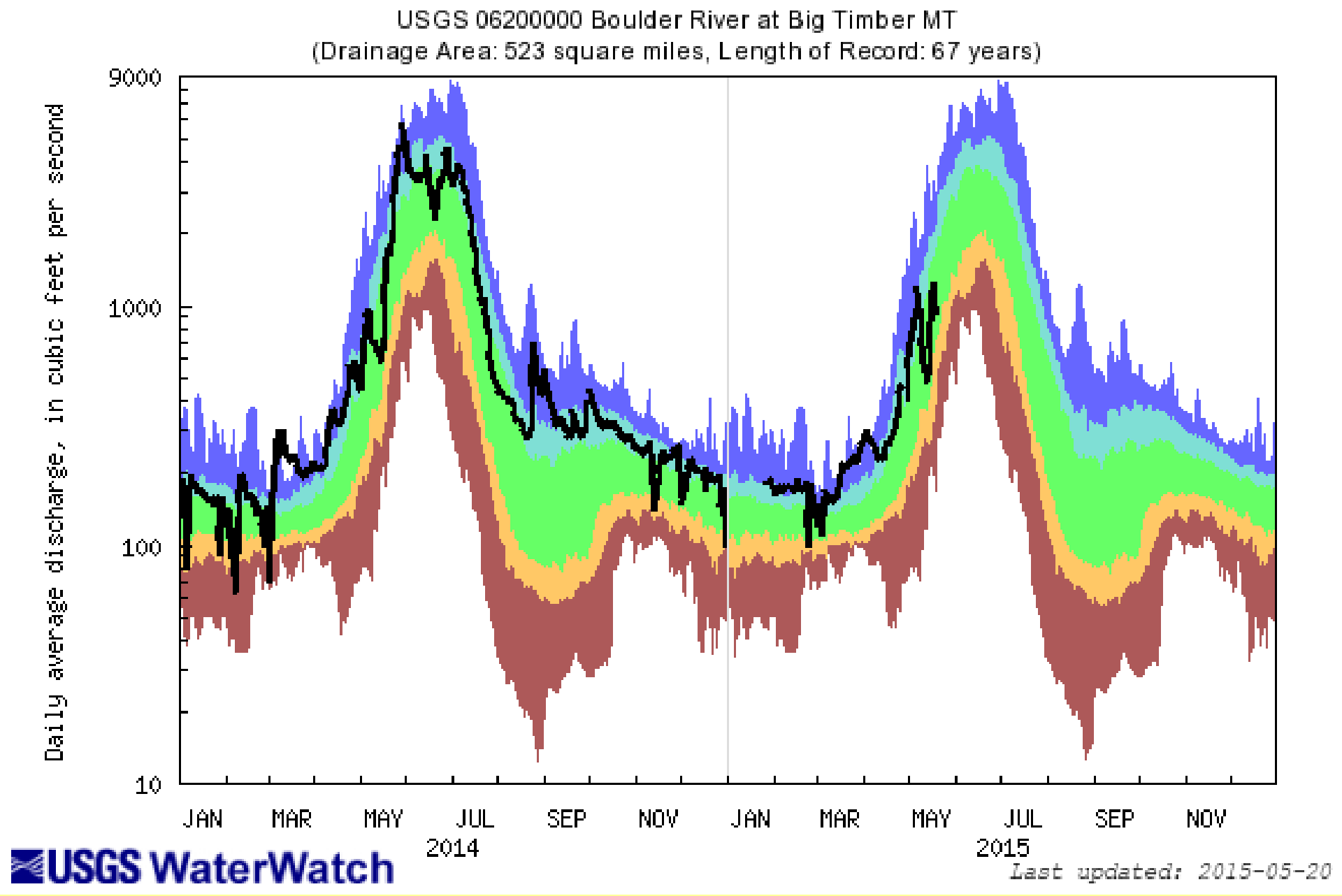
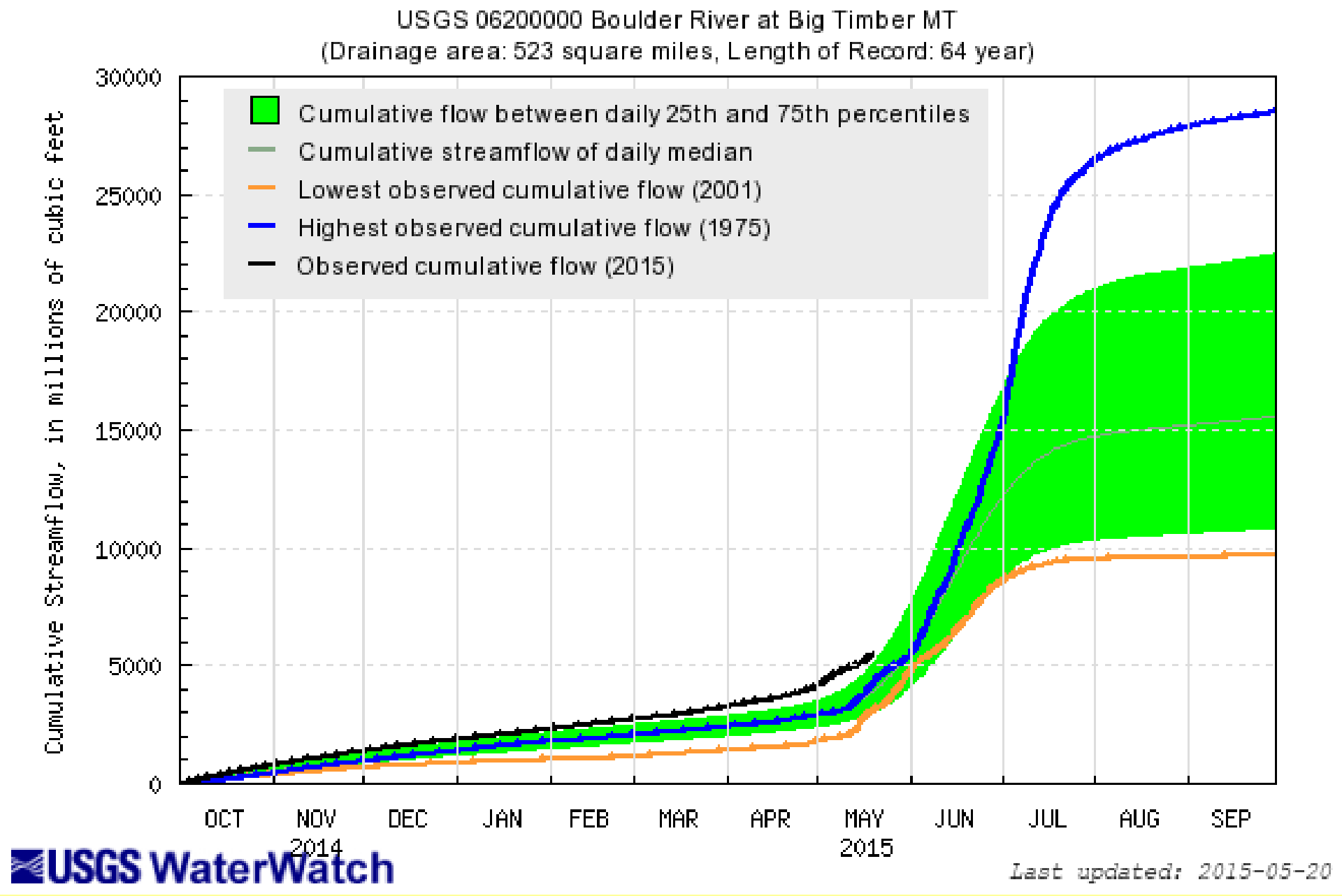

USGS 06120500 Musselshell River at Harlowton MT
(Drainage Area: 1125 square miles, Length of Record: 107 years)
Daily average discharge, in cubic feet per second
7000
1000
100
10
1
0.1
JAN
MAR
MAY
JUL
SEP
NOV
2014
2015
USGS WaterWatch
Last updated: 2015-05-20
Explanation - Percentile classes
lowest-10th percentile
10-24
25-75
76-90
90th percentile -highest
Flow
Much below normal
Below normal
Normal
Above normal
Much above normal


USGS 06191500 Yellowstone River at Corwin Springs MT
(Drainage Area: 2619 square miles, Length of Record: 125 years)
Daily average discharge, in cubic feet per second
40000
10000
1000
JAN
MAR
MAY
JUL
SEP
NOV
2014
JAN
MAR
MAY
JUL
SEP
NOV
2015
USGS WaterWatch
Last updated: 2015-05-20


USGS 06191500 Yellowstone River at Corwin Springs MT
(Drainage area: 2619 square miles, Length of Record: 107 year)
Cumulative flow between daily 25th and 75th percentiles
Cumulative streamflow of daily median
Lowest observed cumulative flow (1934)
Highest observed cumulative flow (1997)
Observed cumulative flow (2015)
Cumulative Streamflow, in millions of cubic feet
180000
160000
140000
120000
100000
80000
60000
40000
20000
0
OCT
NOV
2014
DEC
JAN
FEB
MAR
APR
MAY
2015
JUN
JUL
AUG
SEP
USGS WaterWatch
Last updated: 2015-05-20


USGS 06200000 Boulder River at Big Timber MT
(Drainage Area: 523 square miles, Length of Record: 67 years)
Daily average discharge, in cubic feet per second
9000
1000
100
10
JAN
MAR
MAY
JUL
SEP
NOV
2014
2015
USGS WaterWatch
Last updated: 2015-05-20
Explanation - Percentile classes
lowest-10th percentile
10-24
25-75
76-90
90th percentile -highest
Flow
Much below normal
Below normal
Normal
Above normal
Much above normal



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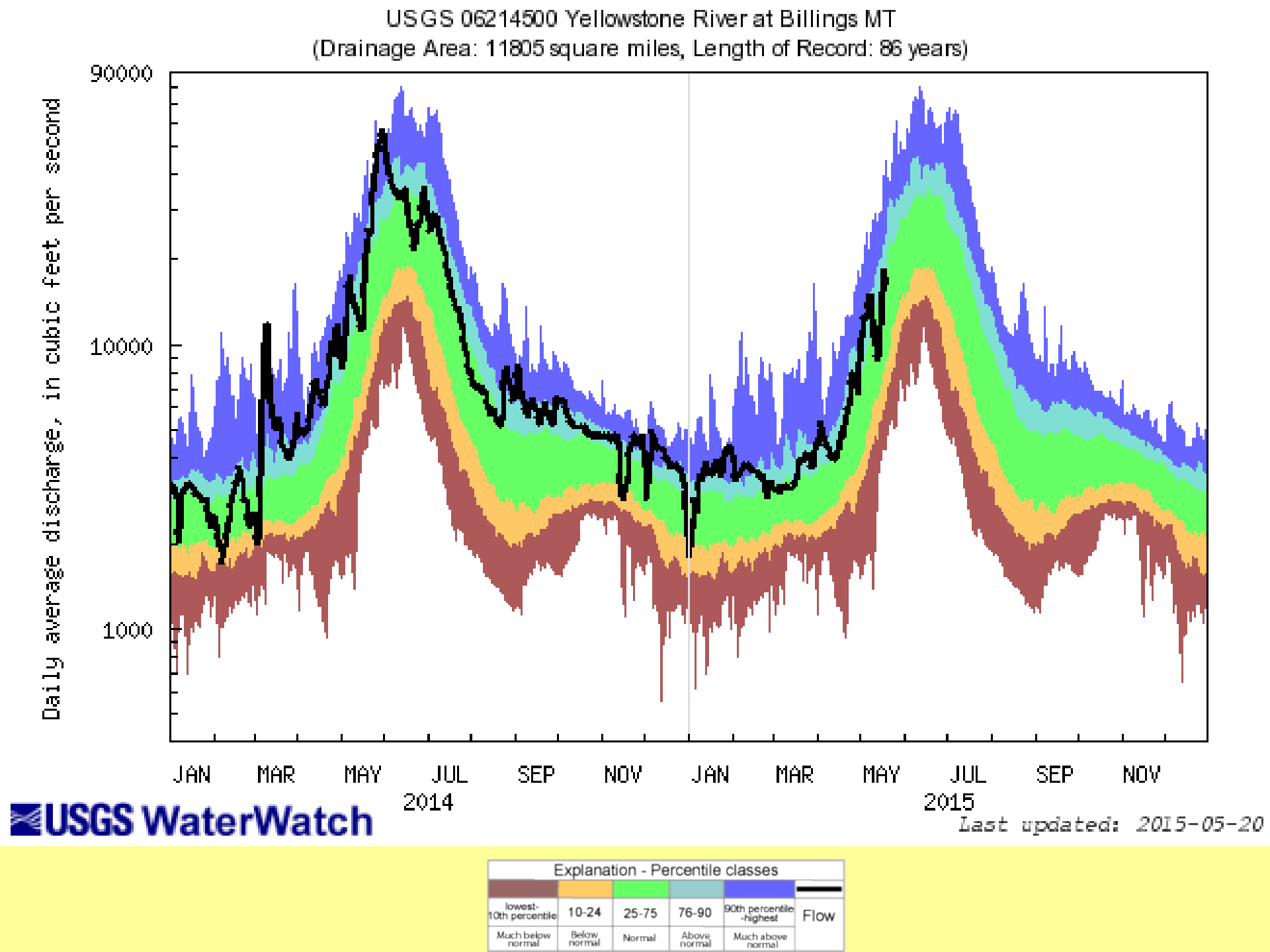
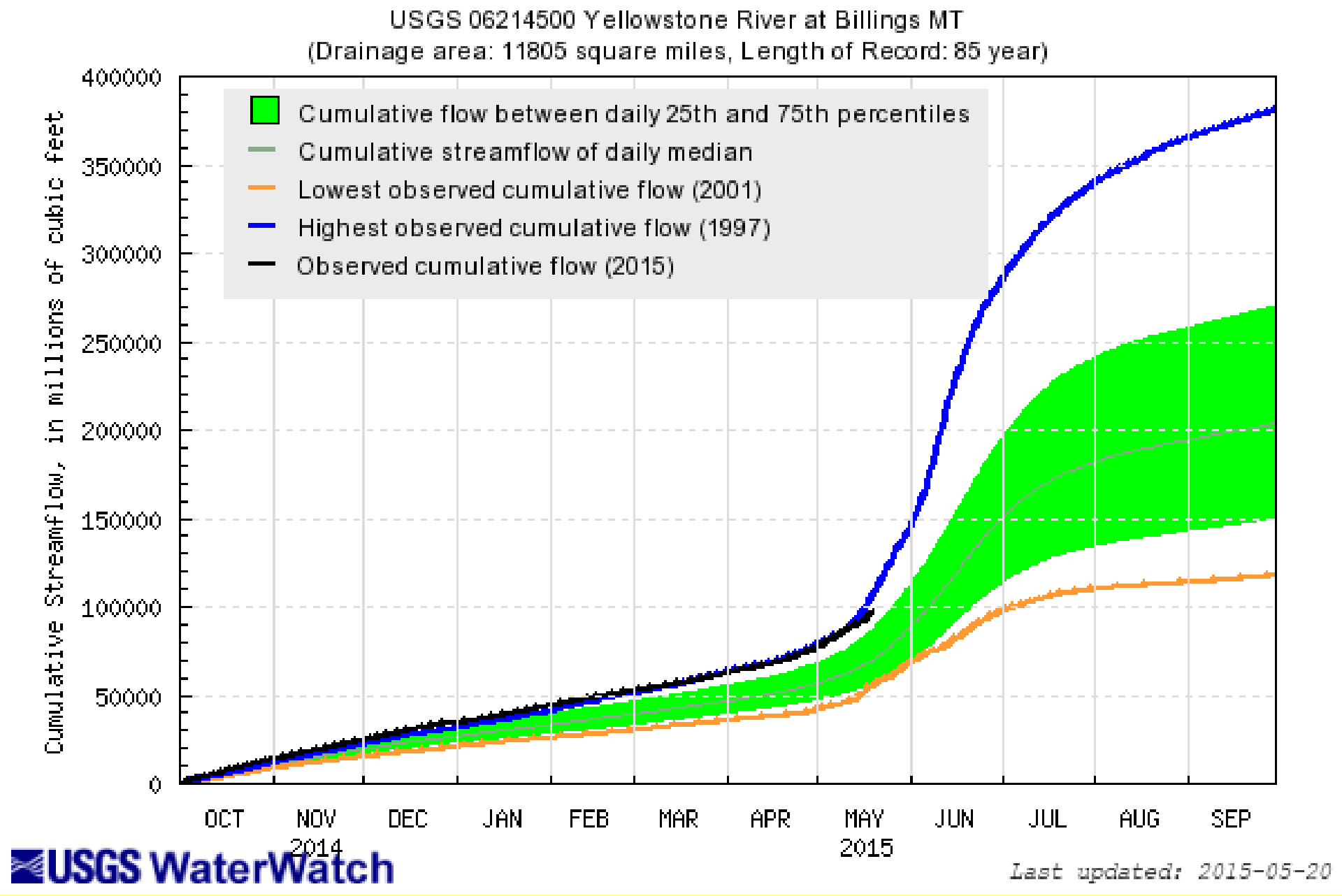

USGS 06214500 Yellowstone River at Billings MT
(Drainage Area: 11805 square miles, Length of Record: 86 years)
Daily average discharge, in cubic feet per second
90000
10000
1000
JAN
MAR
MAY
JUL
SEP
NOV
2014
2015
USGS WaterWatch
Last updated: 2015-05-20
Explanation - Percentile classes
lowest-10th percentile
10-24
25-75
76-90
90th percentile -highest
Flow
Much below normal
Below normal
Normal
Above normal
Much above normal



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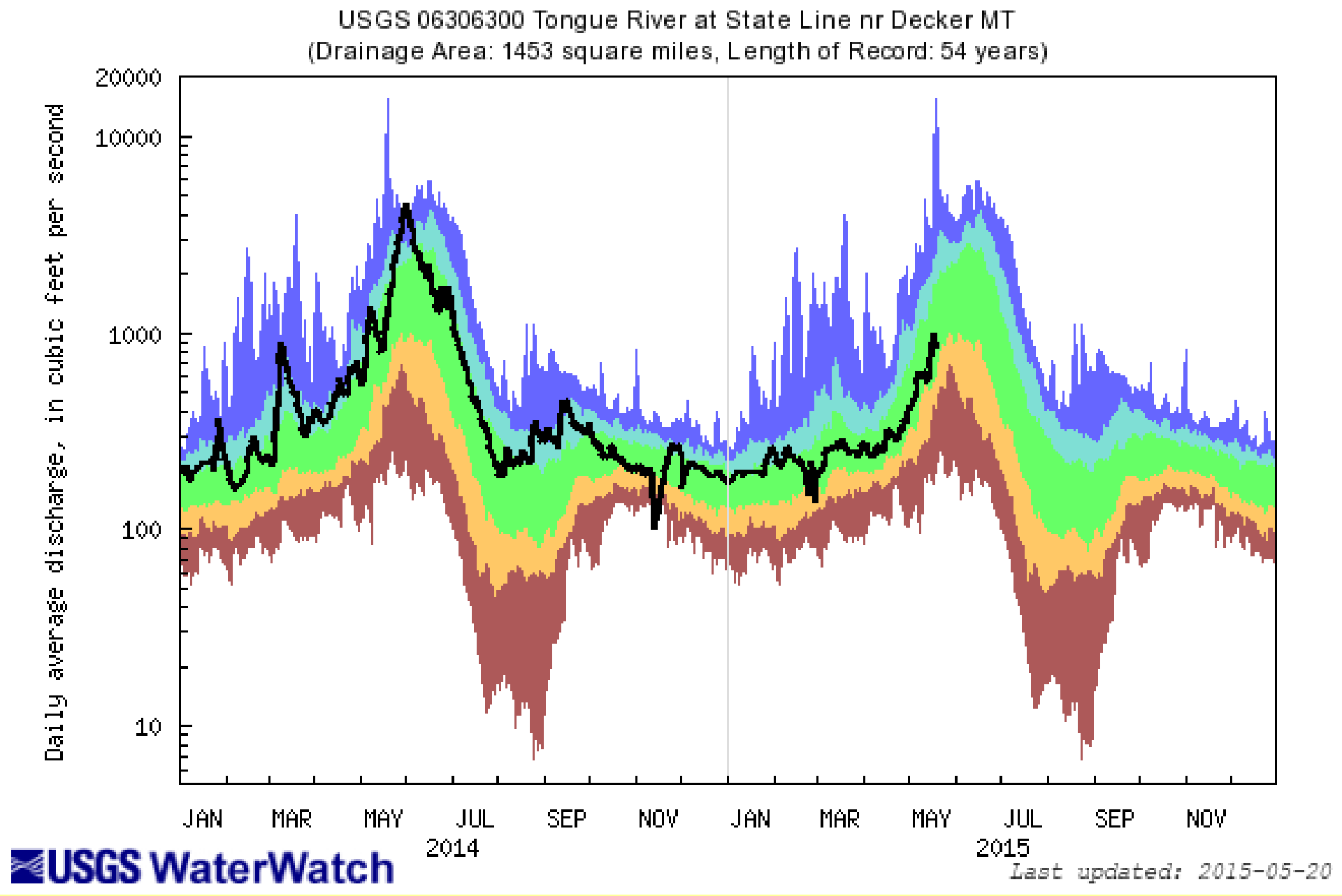
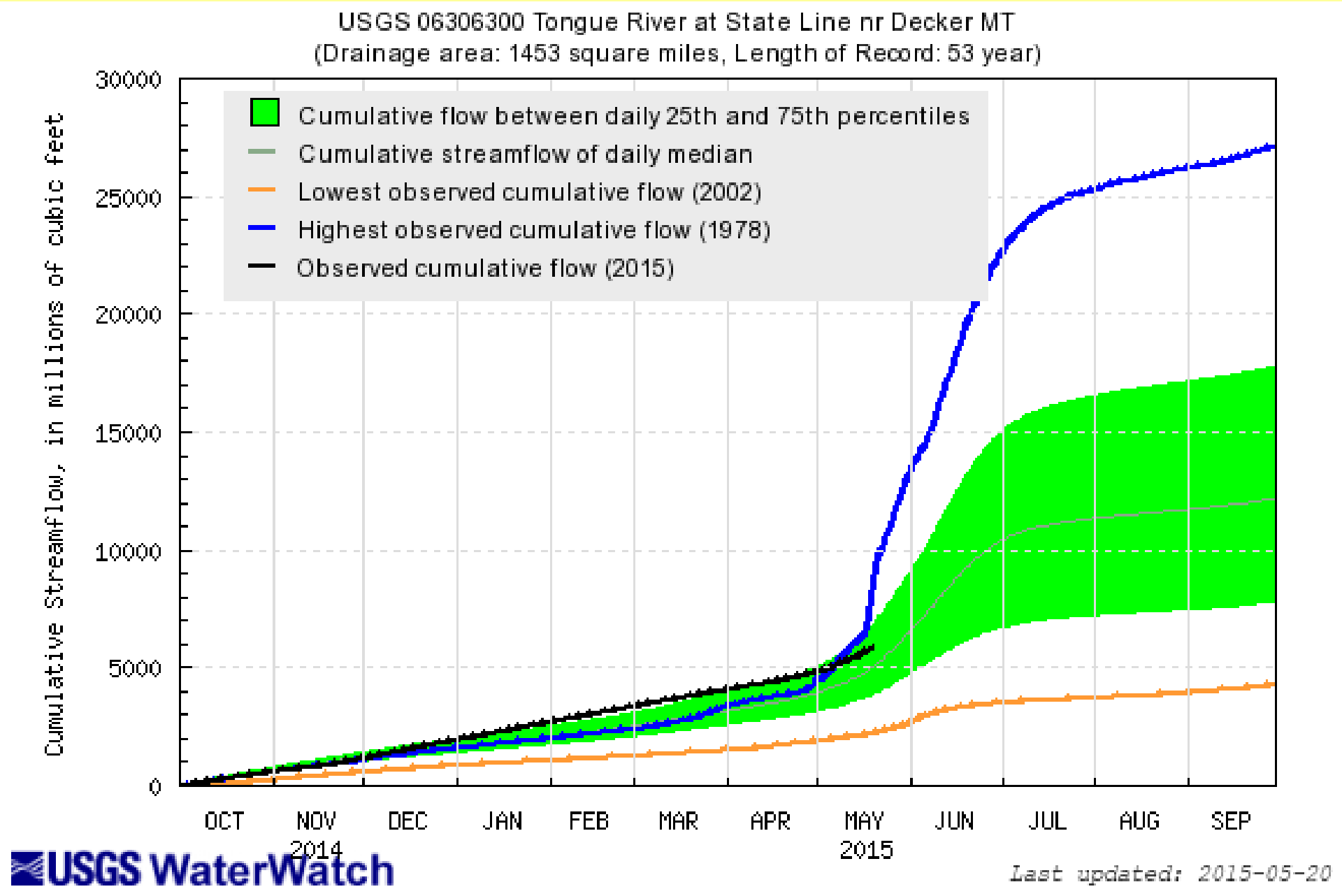
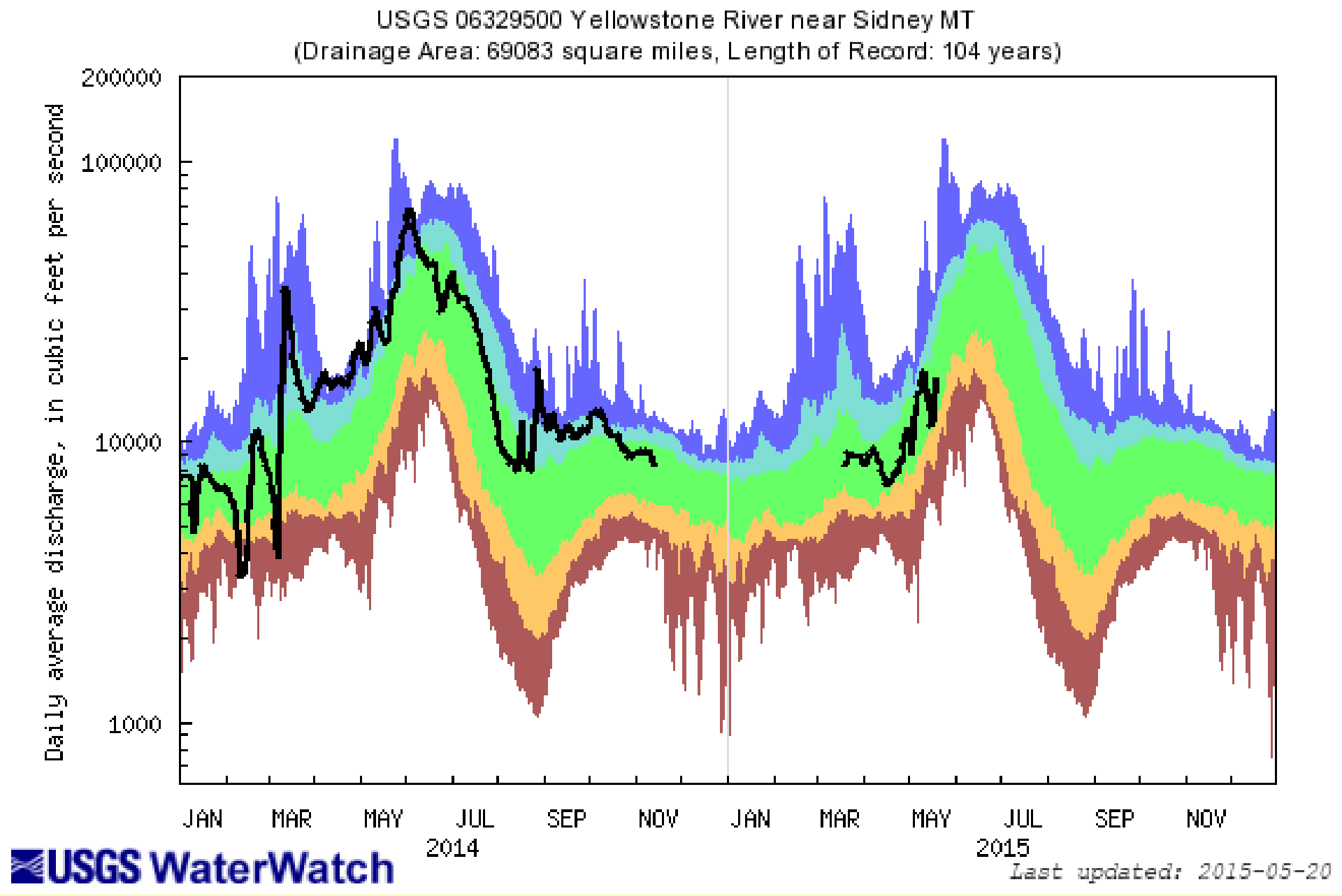
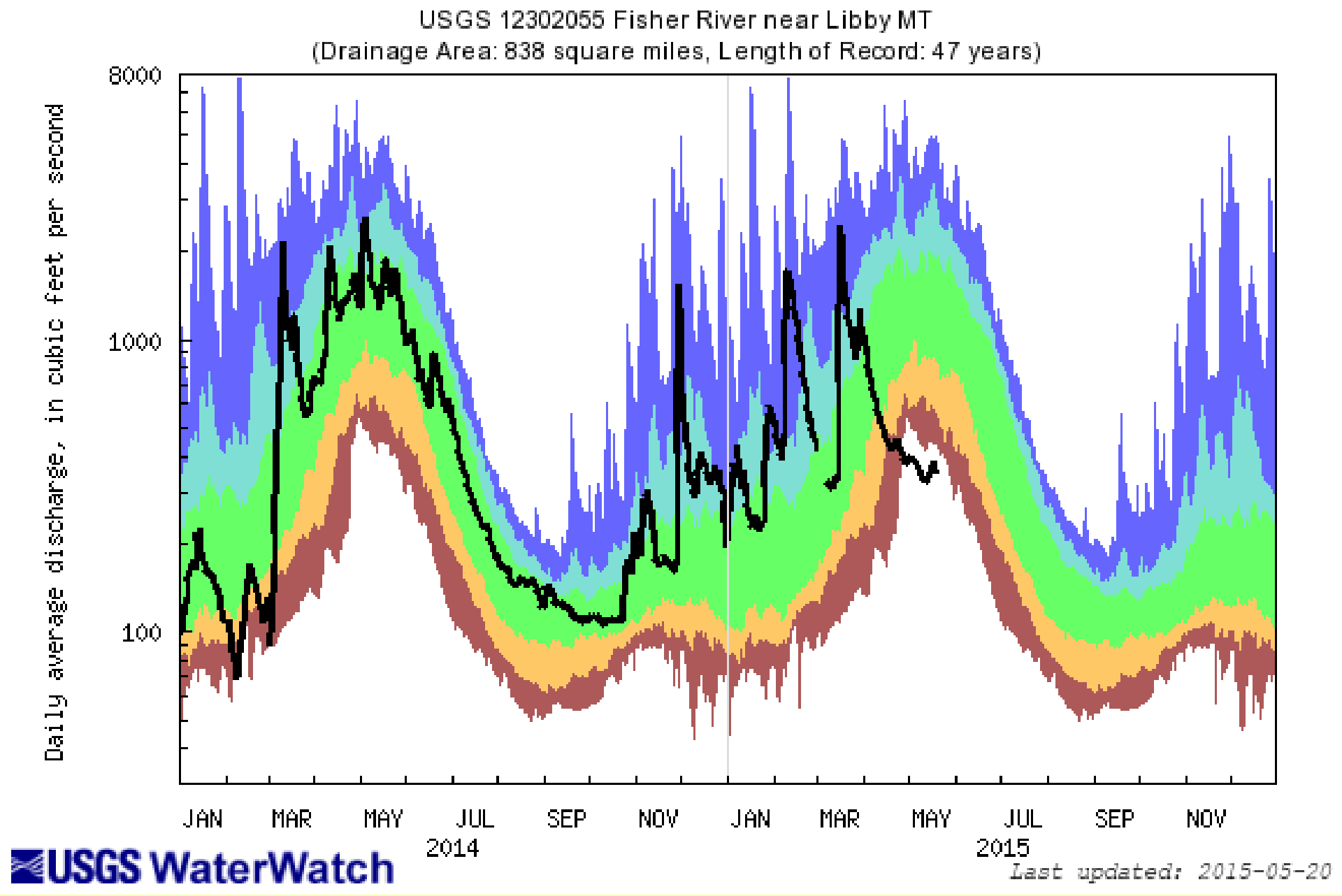
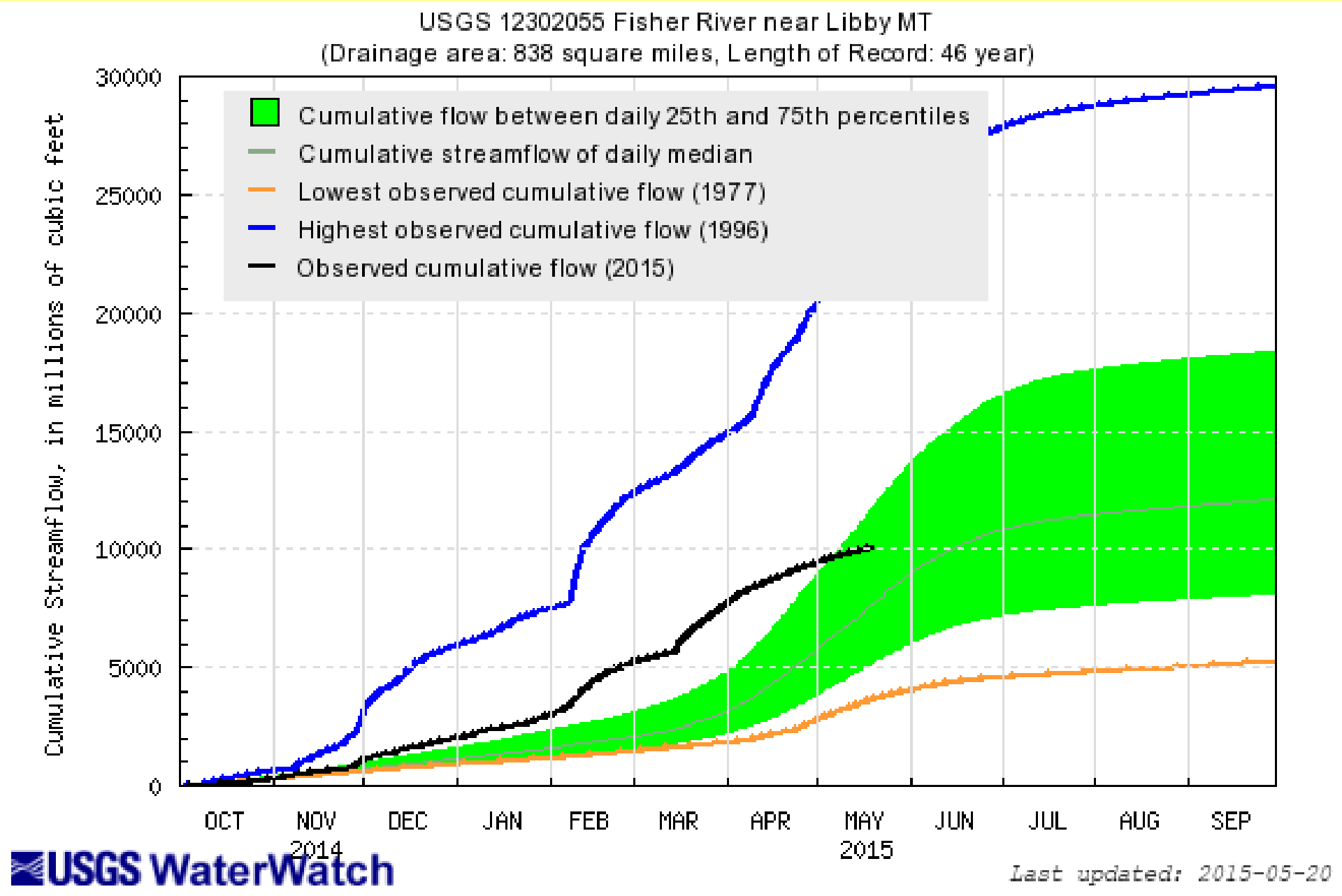
Last updated: 2015-05-20

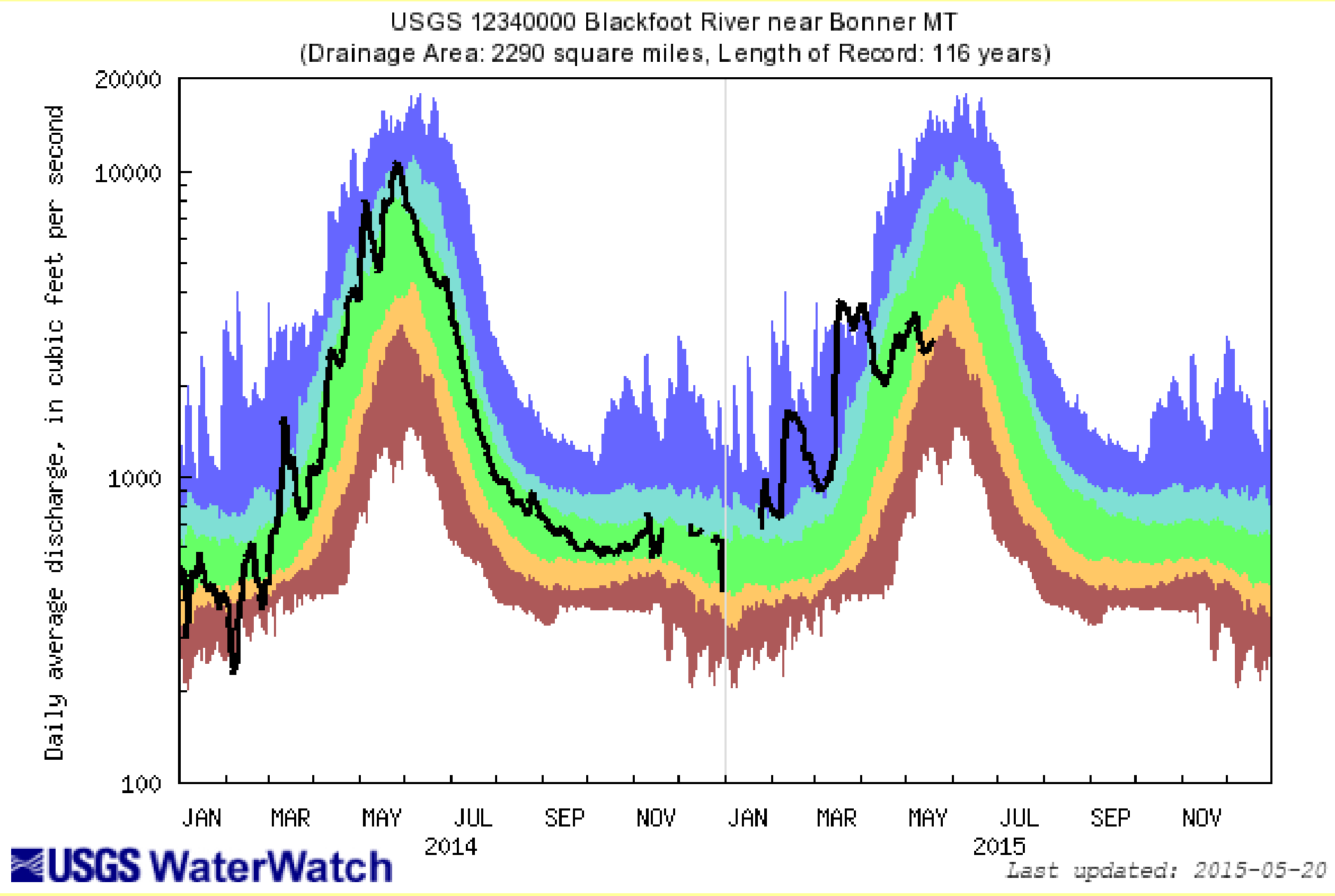

USGS 06306300 Tongue River at State Line nr Decker MT
(Drainage Area: 1453 square miles, Length of Record: 54 years)
Daily average discharge, in cubic feet per second
20000
10000
1000
100
10
JAN
MAR
MAY
JUL
SEP
NOV
2014
2015
USGS WaterWatch
Last updated: 2015-05-20
Explanation - Percentile classes
lowest-10th percentile
10-24
25-75
76-90
90th percentile -highest
Flow
Much below normal
Below normal
Normal
Above normal
Much above normal

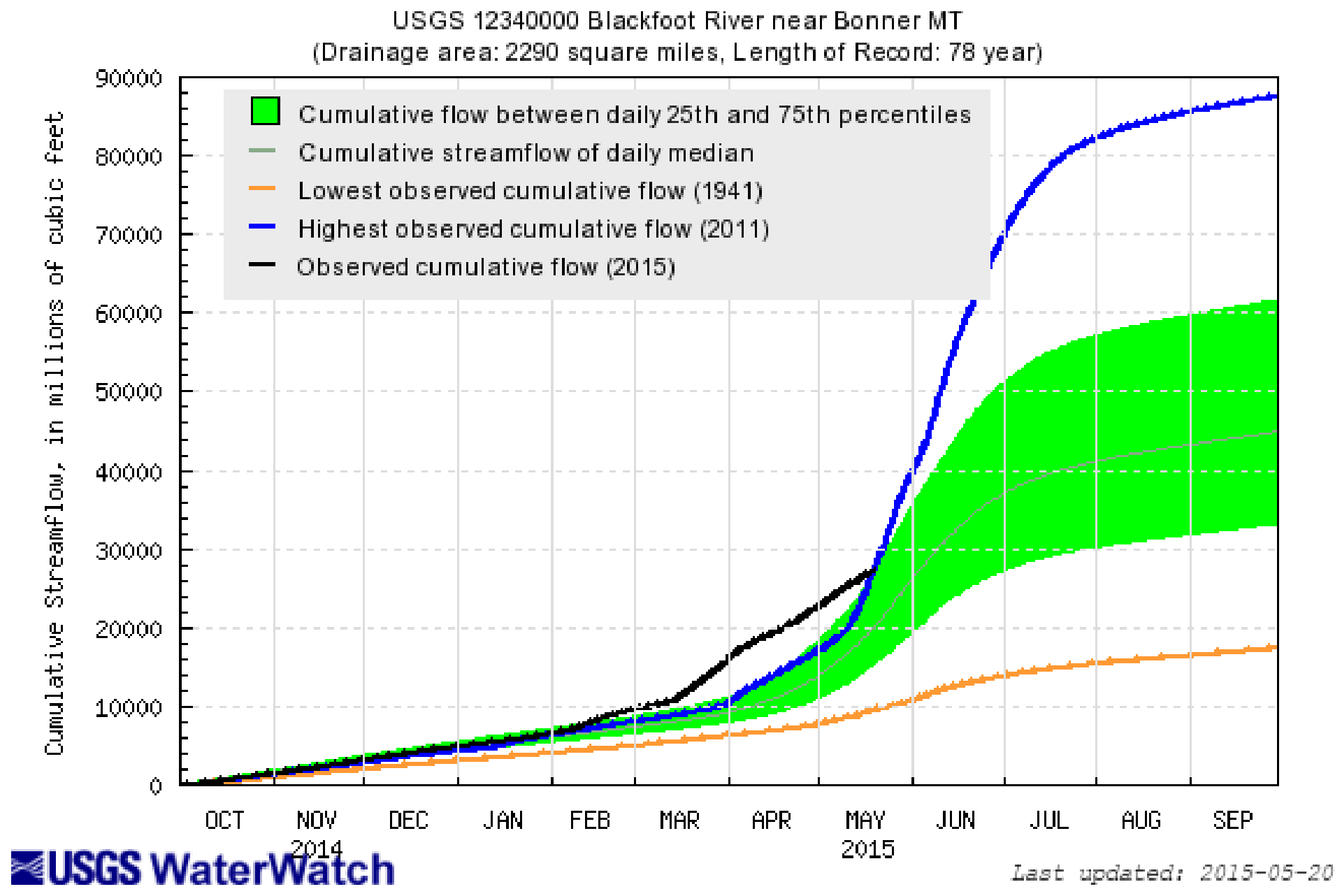

USGS 06306300 Tongue River at State Line nr Decker MT
(Drainage area: 1453 square miles, Length of Record: 53 year)
Cumulative flow between daily 25th and 75th percentiles
Cumulative streamflow of daily median
Lowest observed cumulative flow (2002)
Highest observed cumulative flow (1978)
Observed cumulative flow (2015)
Cumulative Streamflow, in millions of cubic feet
30000
25000
20000
15000
10000
5000
0
OCT
NOV
2014
DEC
JAN
FEB
MAR
APR
MAY
2015
JUN
JUL
AUG
SEP
USGS WaterWatch
Last updated: 2015-05-20

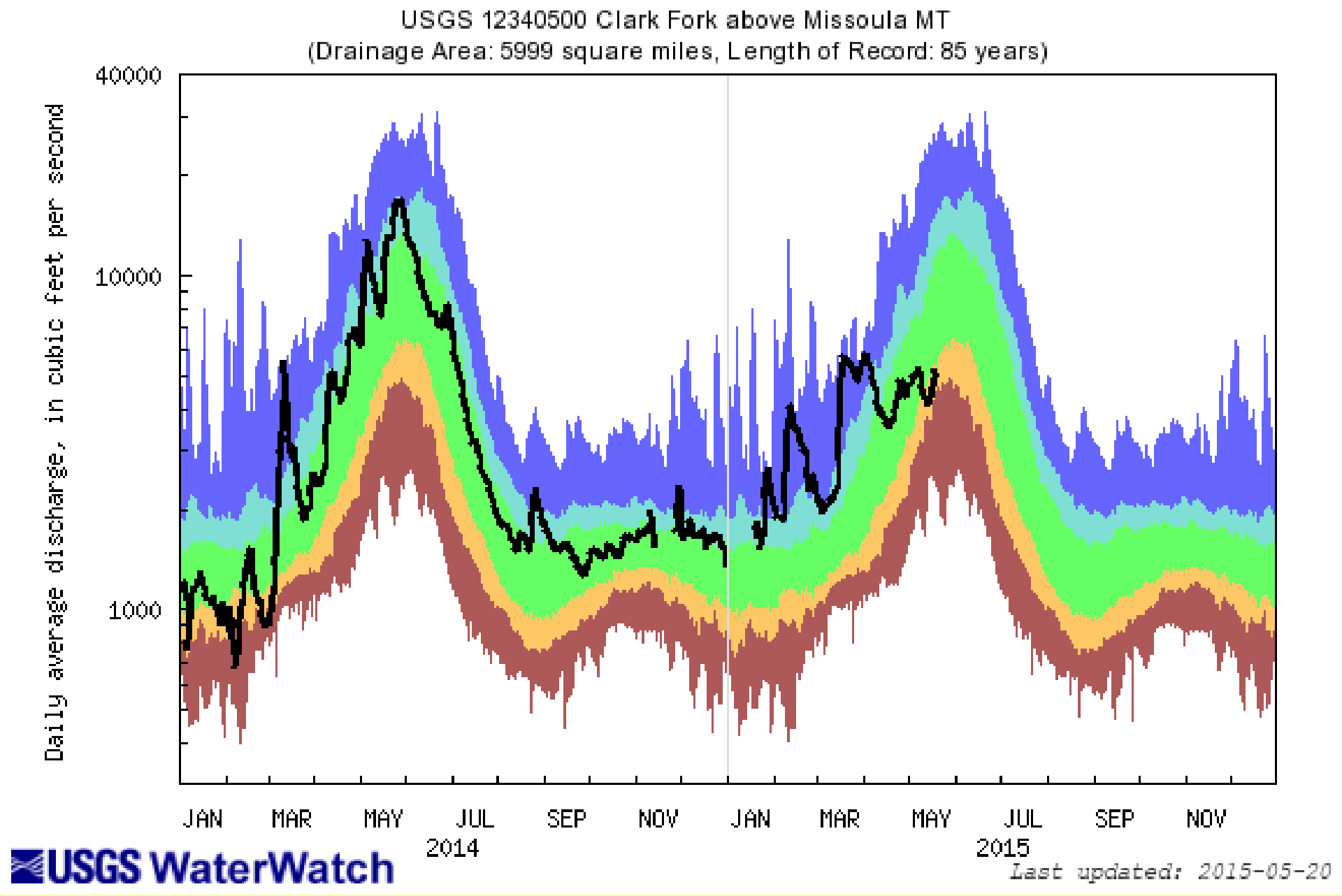

USGS 06329500 Yellowstone River near Sidney MT
(Drainage Area: 69083 square miles, Length of Record: 104 years)
Daily average discharge, in cubic feet per second
200000
100000
10000
1000
JAN
MAR
MAY
JUL
SEP
NOV
2014
2015
USGS WaterWatch
Last updated: 2015-05-20
Explanation - Percentile classes
lowest-10th percentile
10-24
25-75
76-90
90th percentile -highest
Flow
Much below normal
Below normal
Normal
Above normal
Much above normal

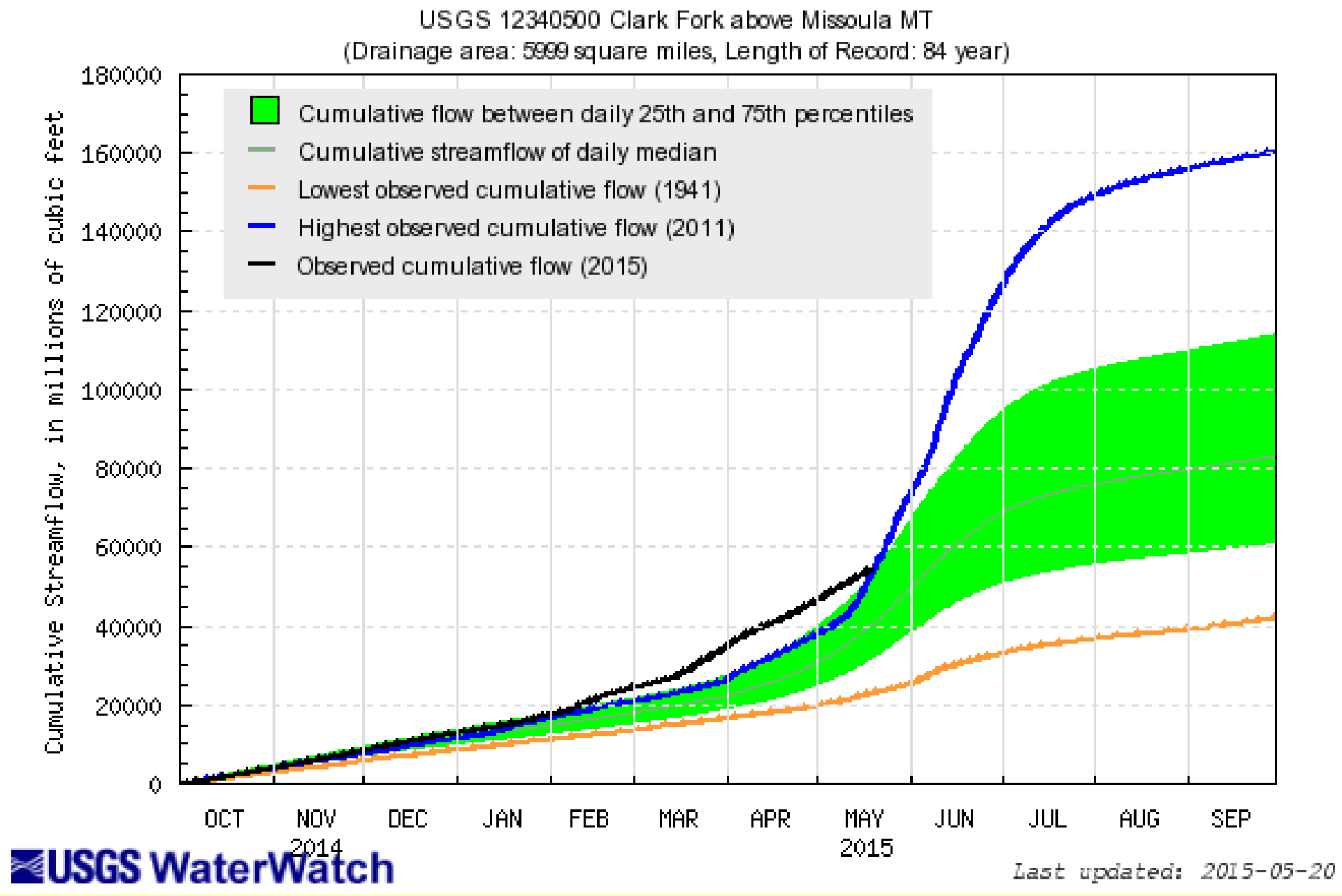

USGS 12302055 Fisher River near Libby MT
(Drainage Area: 838 square miles, Length of Record: 47 years)
Daily average discharge, in cubic feet per second
8000
1000
100
JAN
MAR
MAY
JUL
SEP
NOV
JAN
MAR
MAY
JUL
SEP
NOV
2014
2015
USGS WaterWatch
Last updated: 2015-05-20
Explanation - Percentile classes
lowest-10th percentile
10-24
25-75
76-90
90th percentile -highest
Flow
Much below normal
Below normal
Normal
Above normal
Much above normal


USGS 12302055 Fisher River near Libby MT
(Drainage area: 838 square miles, Length of Record: 46 year)
Cumulative flow between daily 25th and 75th percentiles
Cumulative streamflow of daily median
Lowest observed cumulative flow (1977)
Highest observed cumulative flow (1996)
Observed cumulative flow (2015)
Cumulative Streamflow, in millions of cubic feet
30000
25000
20000
15000
10000
5000
0
OCT
NOV
2014
DEC
JAN
FEB
MAR
APR
MAY
2015
JUN
JUL
AUG
SEP
USGS WaterWatch
Last updated: 2015-05-20


USGS 12340000 Blackfoot River near Bonner MT
(Drainage Area: 2290 square miles, Length of Record: 116 years)
Daily average discharge, in cubic feet per second
20000
10000
1000
100
JAN
MAR
MAY
JUL
SEP
NOV
JAN
MAR
MAY
JUL
SEP
NOV
2014
2015
USGS WaterWatch
Last updated: 2015-05-20
Explanation - Percentile classes
lowest-10th percentile
10-24
25-75
76-90
90th percentile -highest
Flow
Much below normal
Below normal
Normal
Above normal
Much above normal

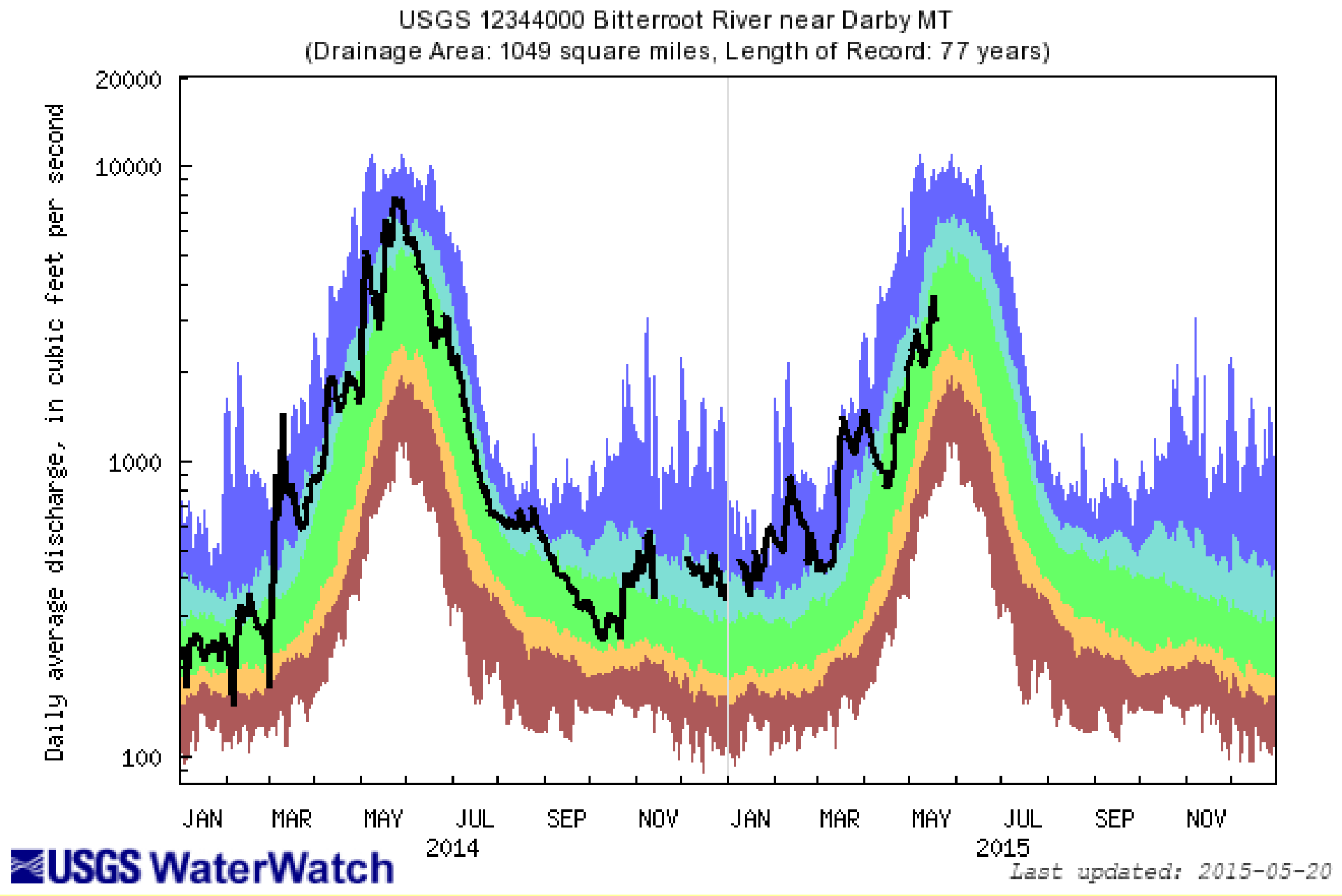

USGS 12340000 Blackfoot River near Bonner MT
(Drainage area: 2290 square miles, Length of Record: 78 year)
Cumulative flow between daily 25th and 75th percentiles
Cumulative streamflow of daily median
Lowest observed cumulative flow (1941)
Highest observed cumulative flow (2011)
Observed cumulative flow (2015)
Cumulative Streamflow, in millions of cubic feet
90000
80000
70000
60000
50000
40000
30000
20000
10000
0
OCT
NOV
2014
DEC
JAN
FEB
MAR
APR
MAY
2015
JUN
JUL
AUG
SEP
USGS WaterWatch
Last updated: 2015-05-20

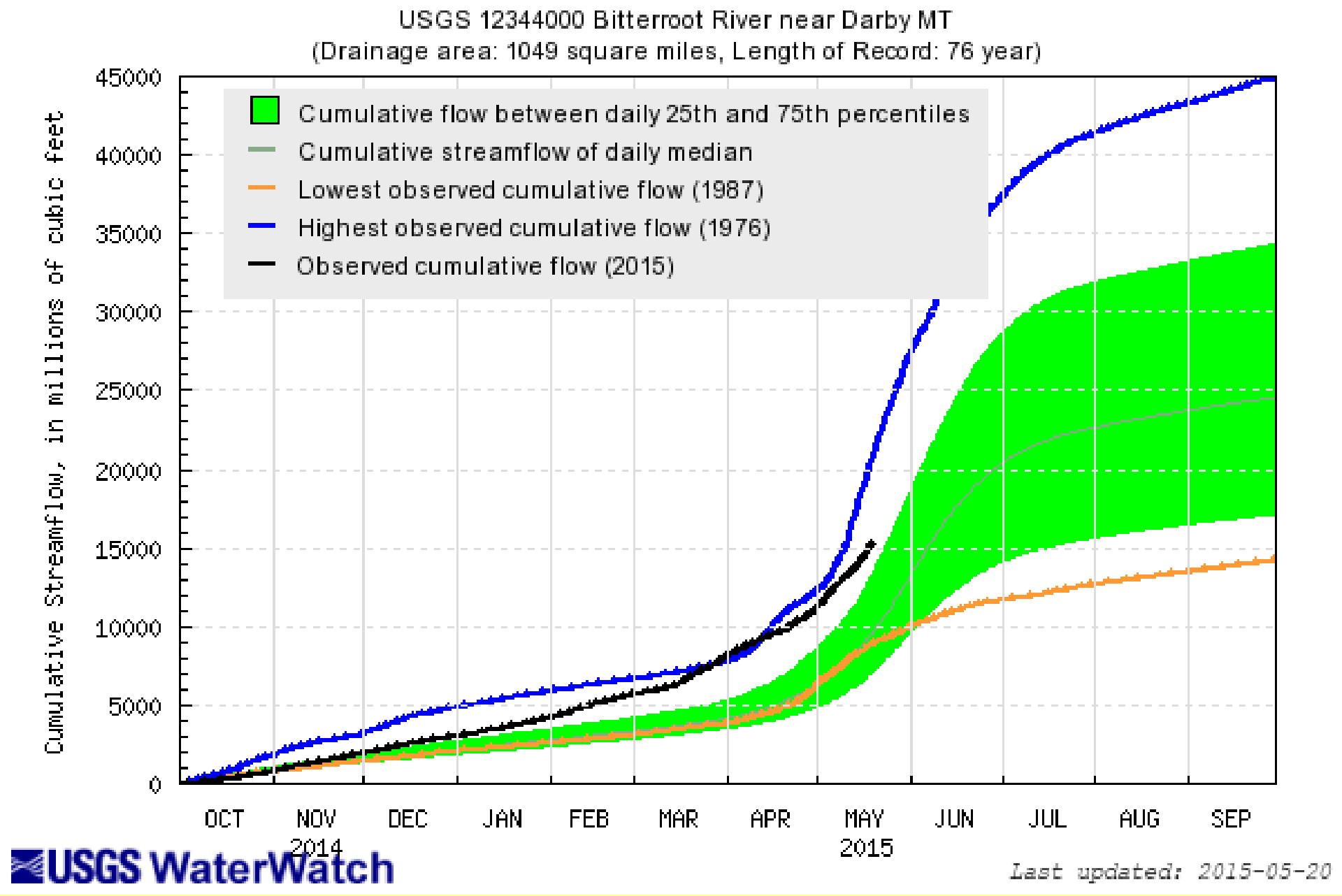

USGS 12340500 Clark Fork above Missoula MT
(Drainage Area: 5999 square miles, Length of Record: 85 years)
Daily average discharge, in cubic feet per second
40000
10000
1000
JAN
MAR
MAY
JUL
SEP
NOV
JAN
MAR
MAY
JUL
SEP
NOV
2014
2015
USGS WaterWatch
Last updated: 2015-05-20
Explanation - Percentile classes
lowest-10th percentile
10-24
25-75
76-90
90th percentile -highest
Flow
Much below normal
Below normal
Normal
Above normal
Much above normal



USGS WaterWatch

Last updated: 2015-05-20


USGS 12344000 Bitterroot River near Darby MT
(Drainage Area: 1049 square miles, Length of Record: 77 years)
Daily average discharge, in cubic feet per second
20000
10000
1000
100
JAN
MAR
MAY
JUL
SEP
NOV
2014
2015
USGS WaterWatch
Last updated: 2015-05-20
Explanation - Percentile classes
lowest-10th percentile
10-24
25-75
76-90
90th percentile -highest
Flow
Much below normal
Below normal
Normal
Above normal
Much above normal



USGS WaterWatch

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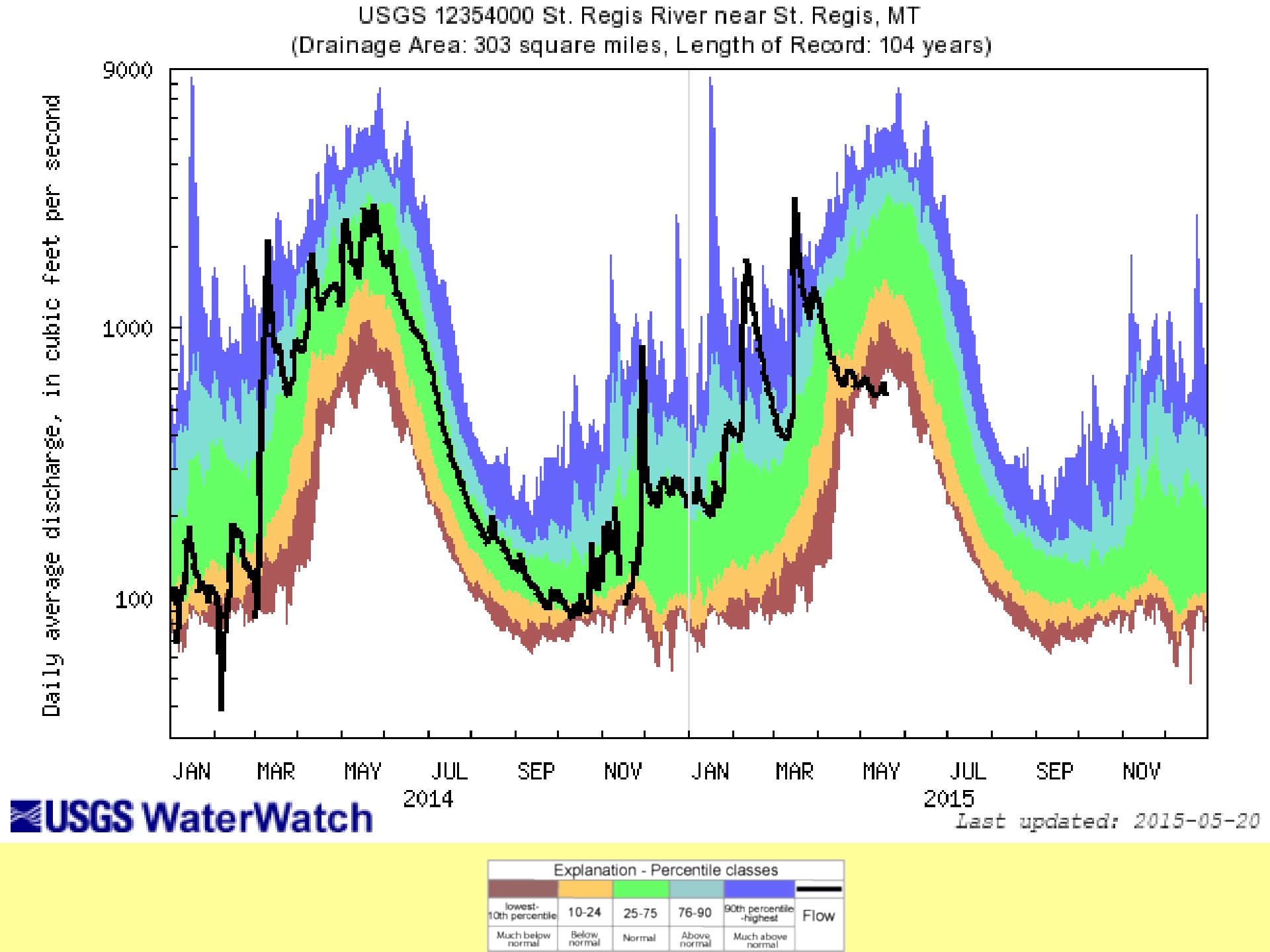
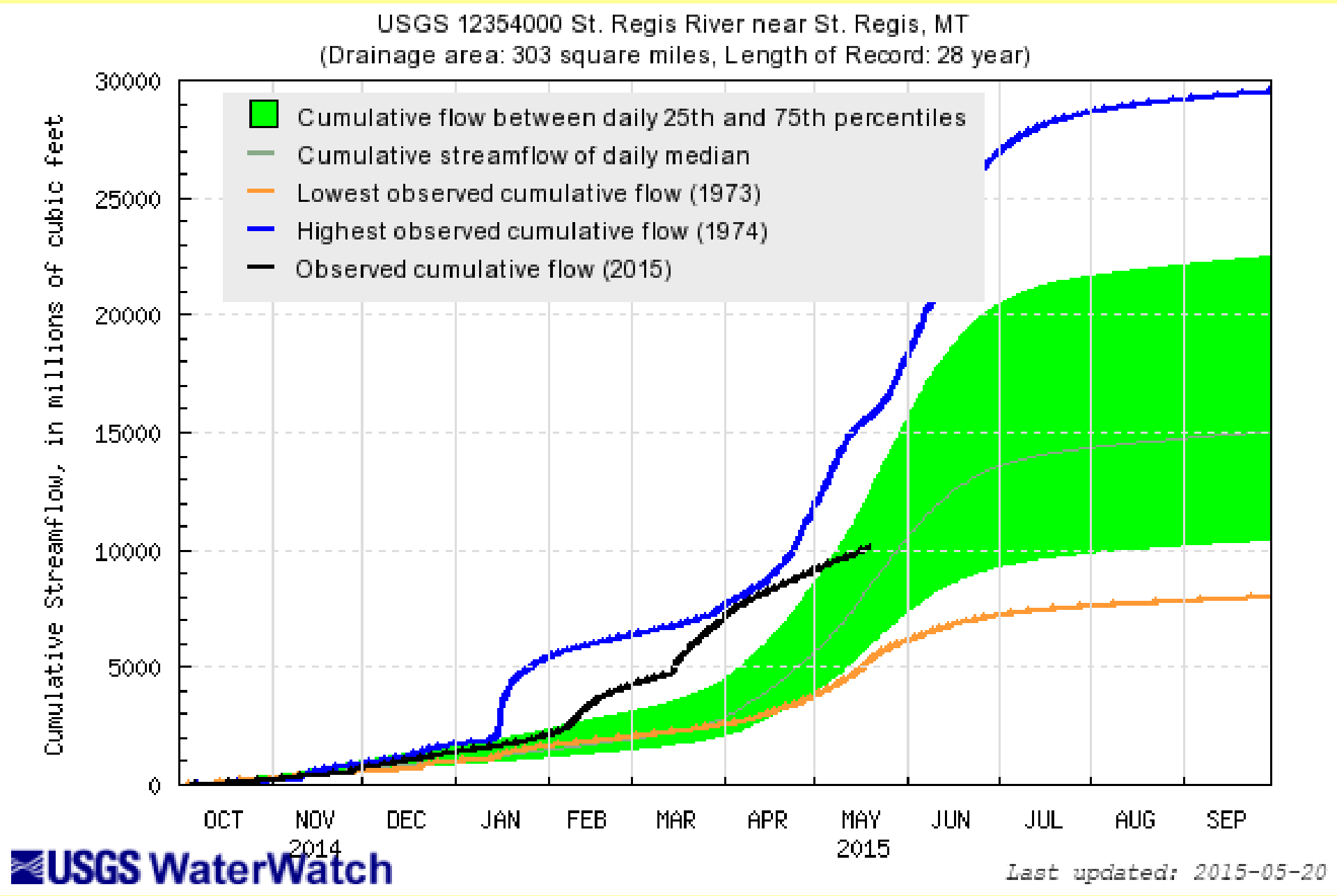
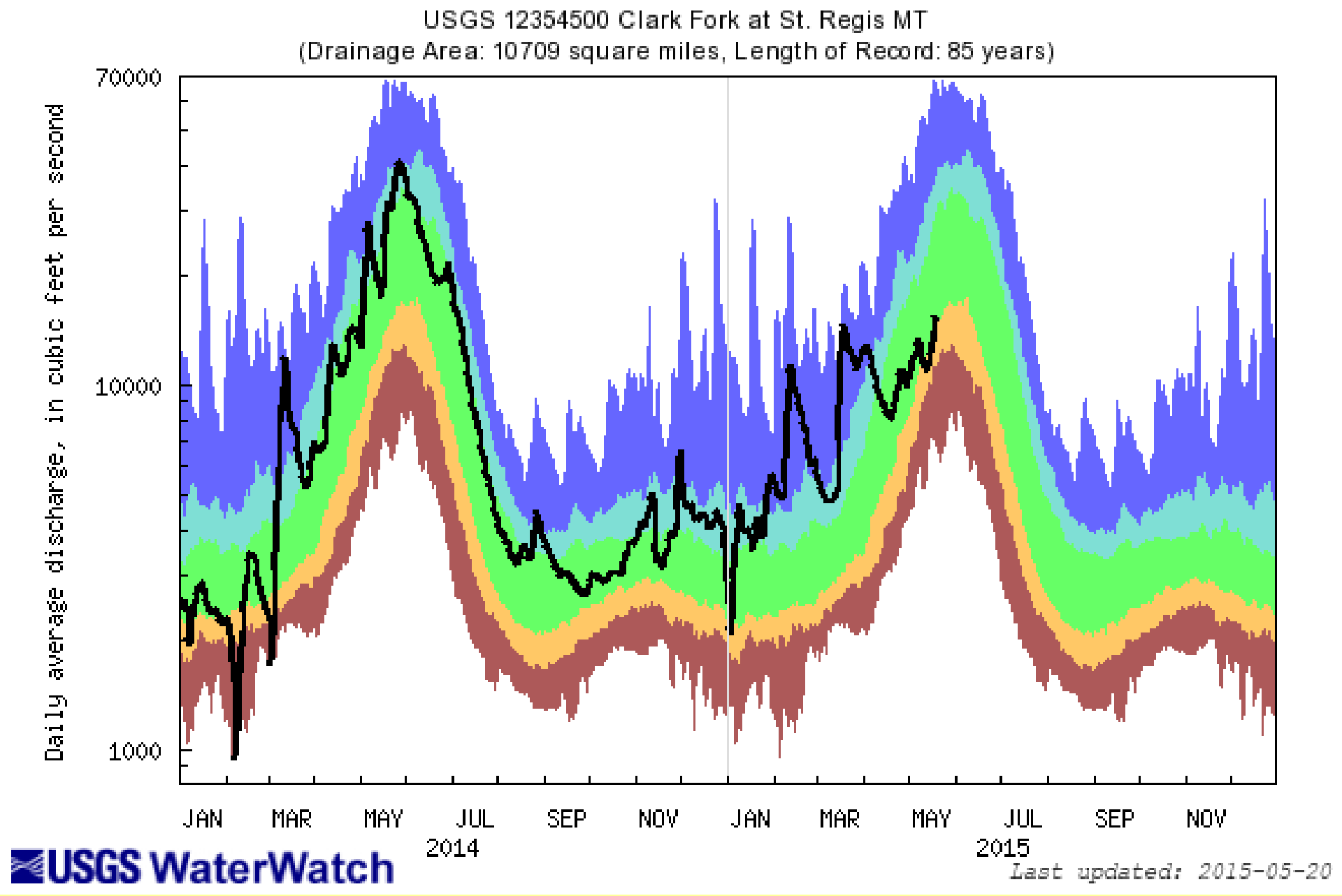
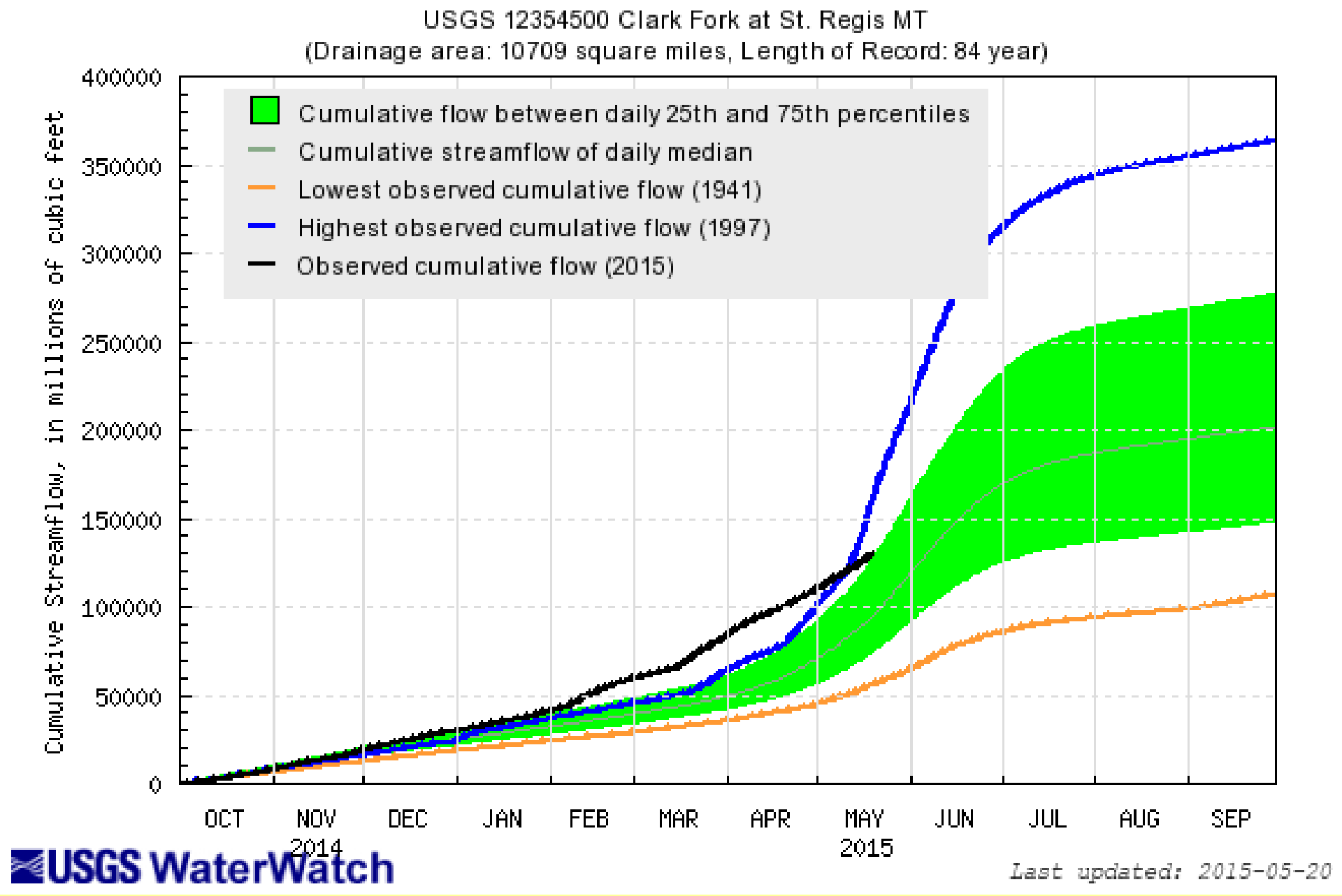

USGS 12354000 St. Regis River near St. Regis, MT
(Drainage Area: 303 square miles, Length of Record: 104 years)
Daily average discharge, in cubic feet per second
9000
1000
100
JAN
MAR
MAY
JUL
SEP
NOV
JAN
MAR
MAY
JUL
SEP
NOV
2014
2015
USGS WaterWatch
Last updated: 2015-05-20
Explanation - Percentile classes
lowest-10th percentile
10-24
25-75
76-90
90th percentile -highest
Flow
Much below normal
Below normal
Normal
Above normal
Much above normal

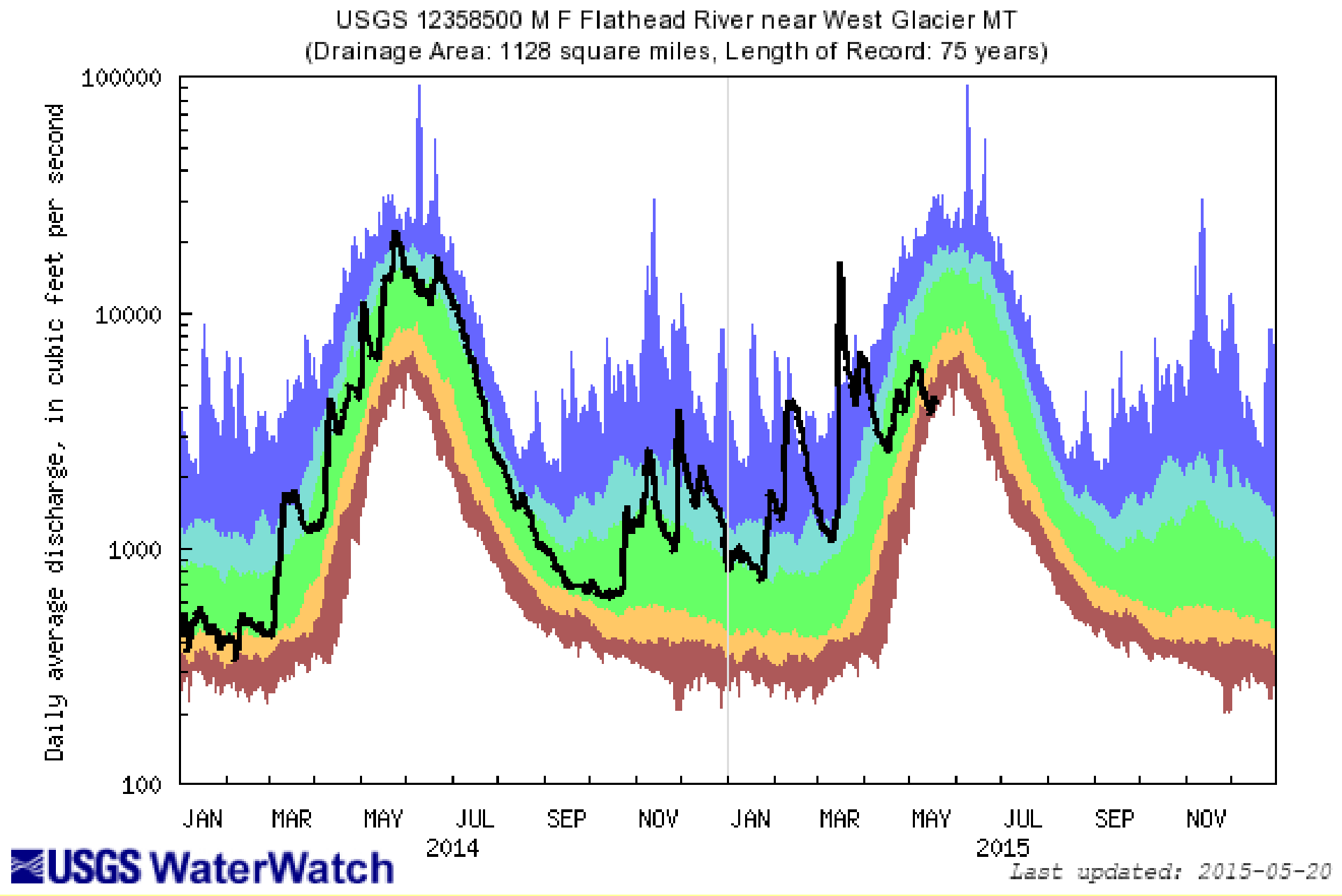

USGS 12354000 St. Regis River near St. Regis, MT
(Drainage area: 303 square miles, Length of Record: 28 year)
Cumulative flow between daily 25th and 75th percentiles
Cumulative streamflow of daily median
Lowest observed cumulative flow (1973)
Highest observed cumulative flow (1974)
Observed cumulative flow (2015)
Cumulative Streamflow, in millions of cubic feet
30000
25000
20000
15000
10000
5000
0
OCT
NOV
2014
DEC
JAN
FEB
MAR
APR
MAY
2015
JUN
JUL
AUG
SEP
USGS WaterWatch
Last updated: 2015-05-20

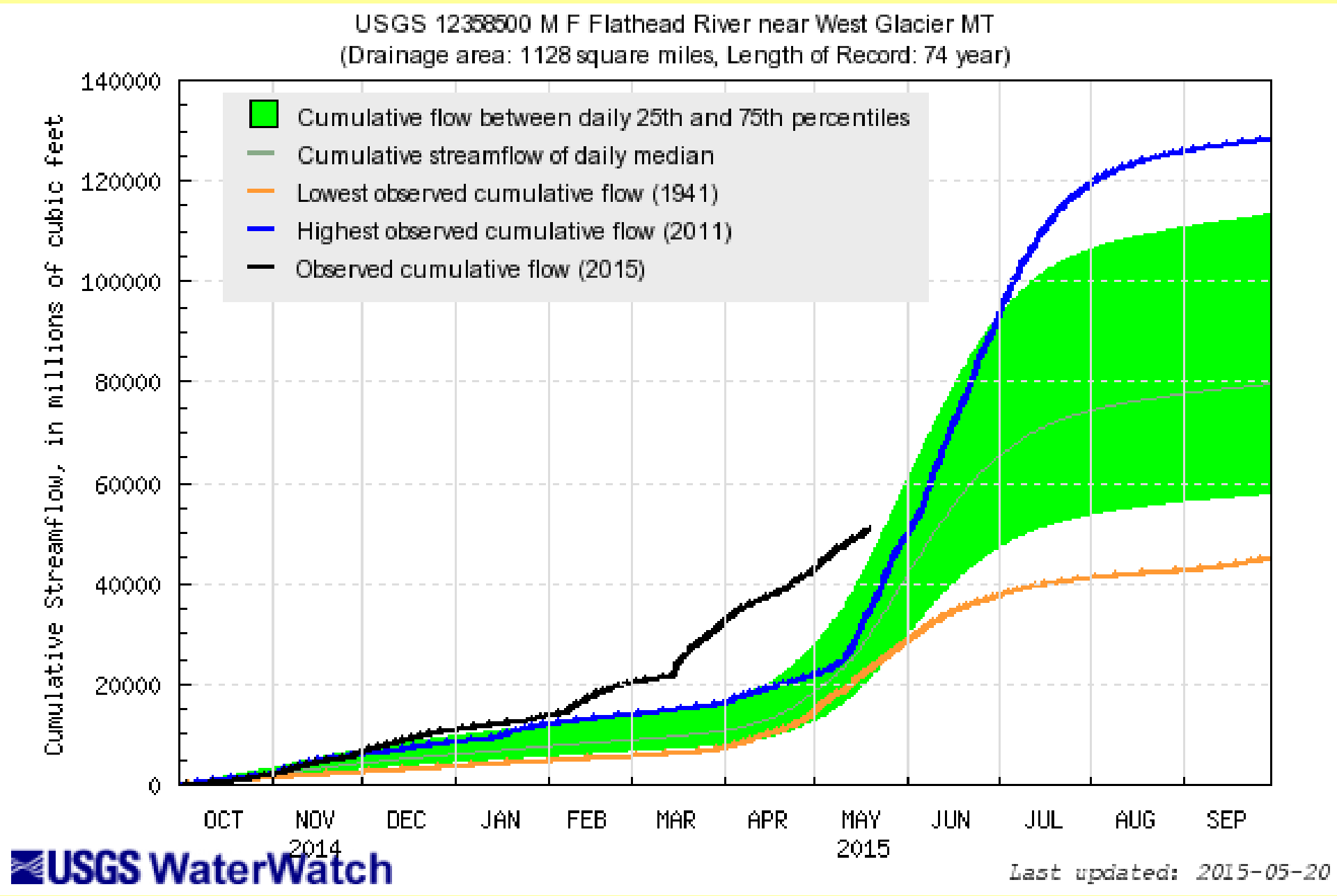

USGS 12354500 Clark Fork at St. Regis MT
(Drainage Area: 10709 square miles, Length of Record: 85 years)
Daily average discharge, in cubic feet per second
70000
10000
1000
JAN
MAR
MAY
JUL
SEP
NOV
JAN
MAR
MAY
JUL
SEP
NOV
2014
2015
USGS WaterWatch
Last updated: 2015-05-20
Explanation - Percentile classes
lowest-10th percentile
10-24
25-75
76-90
90th percentile -highest
Flow
Much below normal
Below normal
Normal
Above normal
Much above normal

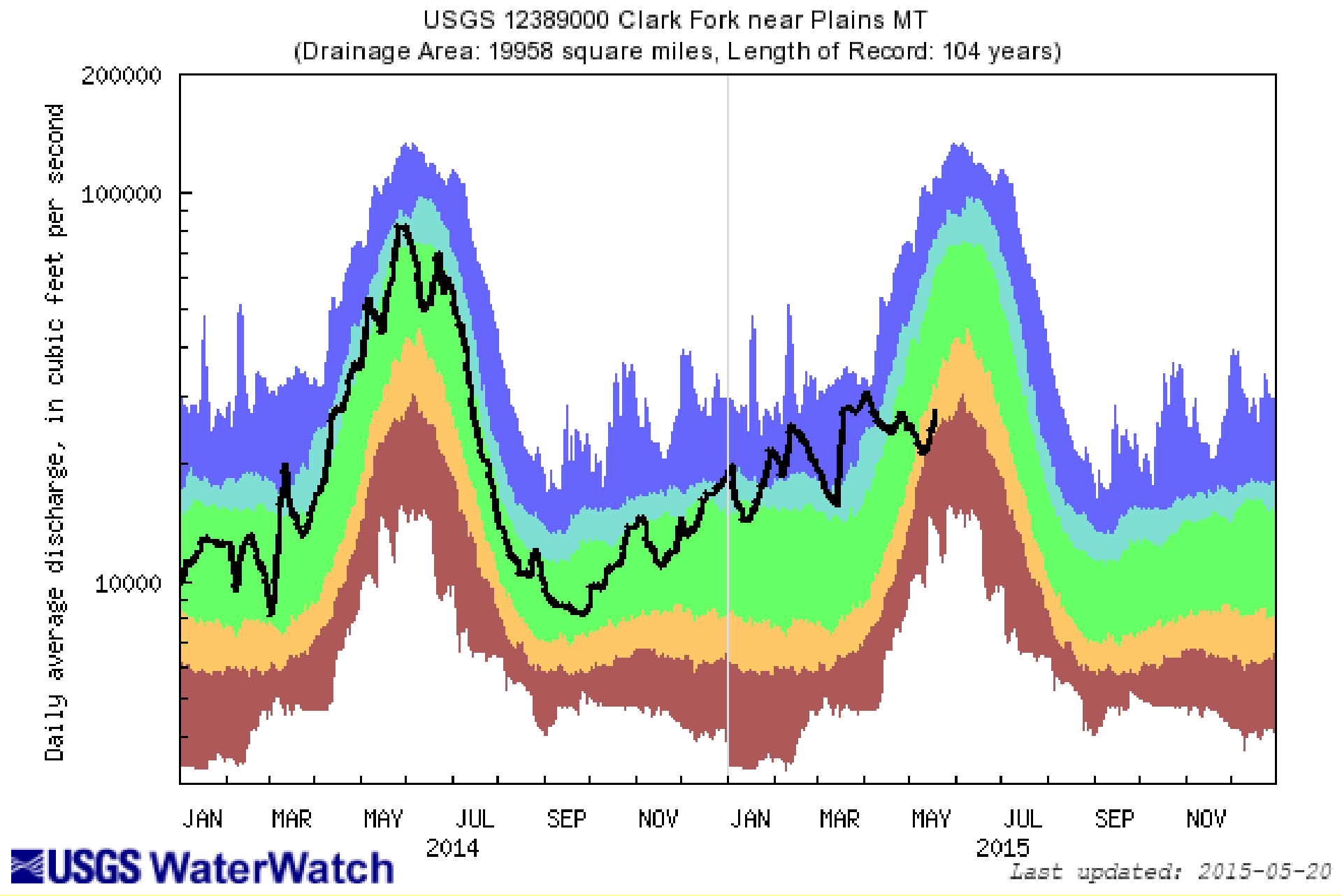


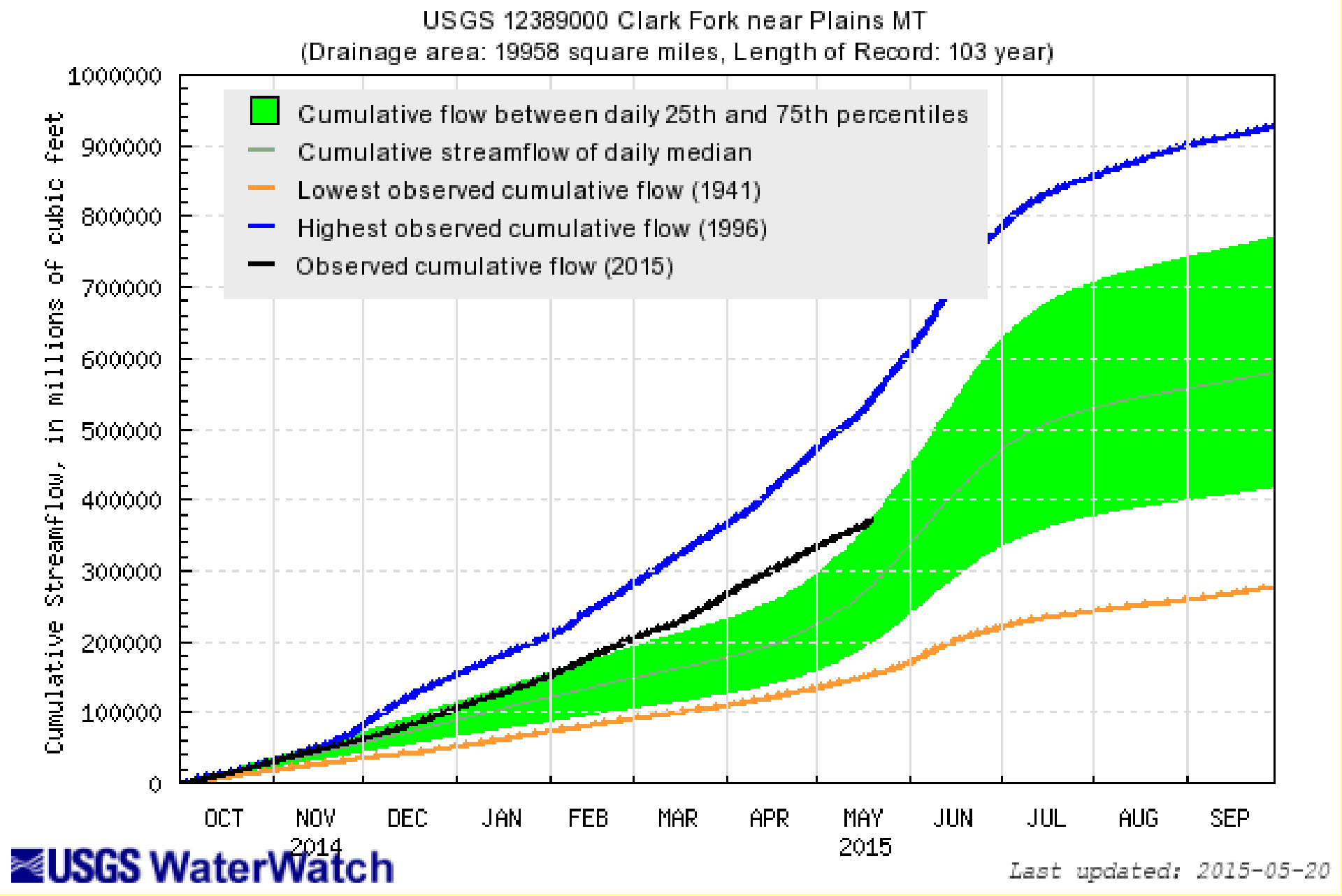
USGS WaterWatch

Last updated: 2015-05-20


USGS 12358500 M F Flathead River near West Glacier MT
(Drainage Area: 1128 square miles, Length of Record: 75 years)
Daily average discharge, in cubic feet per second
100000
10000
1000
100
JAN
MAR
MAY
JUL
SEP
NOV
JAN
MAR
MAY
JUL
SEP
NOV
2014
2015
USGS WaterWatch
Last updated: 2015-05-20
Explanation - Percentile classes
lowest-10th percentile
10-24
25-75
76-90
90th percentile -highest
Flow
Much below normal
Below normal
Normal
Above normal
Much above normal


USGS 12358500 M F Flathead River near West Glacier MT
(Drainage area: 1128 square miles, Length of Record: 74 year)
Cumulative flow between daily 25th and 75th percentiles
Cumulative streamflow of daily median
Lowest observed cumulative flow (1941)
Highest observed cumulative flow (2011)
Observed cumulative flow (2015)
Cumulative Streamflow, in millions of cubic feet
140000
120000
100000
80000
60000
40000
20000
0
OCT
NOV
2014
DEC
JAN
FEB
MAR
APR
MAY
2015
JUN
JUL
AUG
SEP
USGS WaterWatch
Last updated: 2015-05-20


USGS 12389000 Clark Fork near Plains MT
(Drainage Area: 19958 square miles, Length of Record: 104 years)
Daily average discharge, in cubic feet per second
200000
100000
10000
JAN
MAR
MAY
JUL
SEP
NOV
JAN
MAR
MAY
JUL
SEP
NOV
2014
2015
USGS WaterWatch
Last updated: 2015-05-20
Explanation - Percentile classes
lowest-10th percentile
10-24
25-75
76-90
90th percentile -highest
Flow
Much below normal
Below normal
Normal
Above normal
Much above normal


USGS 12389000 Clark Fork near Plains MT
(Drainage area: 19958 square miles, Length of Record: 103 year)
Cumulative flow between daily 25th and 75th percentiles
Cumulative streamflow of daily median
Lowest observed cumulative flow (1941)
Highest observed cumulative flow (1996)
Observed cumulative flow (2015)
Cumulative Streamflow, in millions of cubic feet
1000000
900000
800000
700000
600000
500000
400000
300000
200000
100000
0
OCT
NOV
2014
DEC
JAN
FEB
MAR
APR
MAY
2015
JUN
JUL
AUG
SEP
USGS WaterWatch
Last updated: 2015-05-20

USGS Home Page: http://usgs.gov

NwisWeb: http://water.usgs.gov/mt/nwis
Access to streamflow (realtime and historical), water quality, and ground water information.

Montana District Home Page: http://mt.usgs.gov
Montana Current Streamflow Conditions